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THE LONDON BIRD REPORT

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THE LONDON NATURAL HISTORY SOCIETY

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THE LONDON BIRD REPORT

Number 27, 1962



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being undertaken by J. Gooders, but information would still be welcome on a number of other projects which have been described previously. These include studies of the use made by birds, particularly gulls, of refuse dumps and rubbish pits; roosts of hirundines; the habits of gulls feeding on filter beds with rotary sprinklers; the seasonal occurrence of bramblings in beech woods and on sewage farms; and the adoption by reed buntings of a drier type of habitat than normal in the breeding season.

These subjects offer a varied field for members with an enquiring type of mind, and anyone willing to assist should write to the Editor or Recorders for further details. Above all, however, we would appeal for help to be given with the Common Bird Census being organized by the British Trust for Ornithology. This aims at finding out as much as possible about the numbers of breeding birds and their fluctuations, with the object of providing the basic information essential to a study of the effect of changes in habitat and in agricultural practice. It is hoped that the information obtained will be of the utmost value in any future study of population distribution and change and that it will materially assist the Nature Conservancy in framing a policy of bird protection and habitat conservation.

A report on the tree sparrow enquiry organized by B. L. Sage appears on p. 56 and an account by Donald Parr of the bird life of Hersham Sewage Farm contributes some interesting information about the food of birds. A note on the activities of Beddington Ringing Station is on p. 91 and a book review is also included in this issue.

"London's Birds"

"LONDON'S BIRDS", the first full-length colour film to be made by a local natural history society, was shown for the first time at St. Pancras Town Hall on 26th to 29th March 1963, twice-nightly, with two special matinees for school children. Some 4,000 tickets were sold for the evening performances and after covering all expenses of making and showing the film, a small profit was made. The courageous decision to back the film, taken by Council in 1958 when the finances of the Society were severely strained, had been amply justified. The Society now has a valuable historical record of the London scene and its birds at a time when rapid changes are taking place, it has received excellent publicity, resulting already in 50 new members, and the further showings of the film which are to be arranged in London and the provinces should bring added financial benefits.

The credit for this success goes, above all, to Raymond Cordero and Bill Park, who conceived the original idea, and then spent much of their leisure time for four long years battling with the English climate and the difficulties of filming in a densely populated area to capture 70 species in colour, including rarities such as the Little Ringed Plover, Black Redstart, Waxwing, Great Grey Shrike, Red-backed Shrike and Crossbill, as well as faithfully recording how many of the commoner species adapt themselves to man-made and dominated habitats. The high technical and artistic quality of their work has earned warm praise both from amateurs and professionals. The planning of the film, with the editing and the preparation of the script, were the work of a special committee, consisting of the two photographers, with Leslie Baker, B. A. Richards and Stanley Cramp (Chairman). When their labours were nearing completion it was learned that the Festival Hall, the original choice for the showing of the film, would not be available for at least two years. Once again, a difficult decision had to be taken, and after much anxious questioning, Council decided to risk a little-known venue and to run eight performances instead of one. This meant that all the planning and organization had to be done by Society members and a special committee was appointed in 1962 for this purpose, consisting of Miss E. P. Brown (Secretary), Mrs. L. M. P. Small, Leslie Baker, Stanley Cramp (Chairman), and V. F. Hancock. They had to wrestle with problems of posters, leaflets, tickets, programmes and publicity, and in all this the technical knowledge and artistic skill of Leslie Baker were of inestimable value.

The early months of 1963 were a time of frenzied activity for all those involved in the final preparations. The last shots had to be taken, the editing completed and copies made, while the rehearsals of the team of commentators (Leslie Baker, Raymond Cordero, Stanley Cramp, Bill Park, Pat Sellar, W. G. Teagle and D. I. M. Wallace) went on. Thanks to the

efforts of many people the film received excellent publicity in the national and local press and on B.B.C. sound and television, resulting in much work for Mrs. Small, who dealt with the great bulk of the ticket sales. She was also responsible for the organizing and recruiting of the keen band of stewards, programme sellers, box-office clerks, literature sellers etc., who were essential to the success of the performances. A distinguished group of Society members—Sir Hugh Elliott, James Fisher, R. C. Homes, Eric Hosking, Lord Hurcomb, Maxwell Knight, E. M. Nicholson and Eric Simms kindly acted as Chairmen, and J. E. Lousley, the President, B. L. J. Byerley, V. F. Hancock and B. L. Sage, and their wives, were the hosts and hostesses for the various performances. And, despite the forebodings which must have troubled the stoutest hearts at times, the public came in numbers and applauded and the showings went through without the slightest hitch. The Society can indeed be proud of its latest major venture and grateful to all those who, in many ways, worked so hard to make it a success.

S.C.

ACCEPTED OR REJECTED?

All records of rare or "difficult" birds and of unusual occurrences of common species such as migrants seen "out of season" are scrutinized by the Records Committee before being accepted for publication in the *L.B.R.* On what grounds are they accepted or rejected?

It is obviously not a sound scientific method to accept a record *solely* on the strength of the observer's known ability or reputation since all records published in the Systematic List must stand the scrutiny not only of readers to-day but also of those who will refer to the *L.B.R.* in the future. All have the right to presume that records are based entirely on *correct identification supported by evidence.*

The work of the Records Committee can be reduced and with it the delay in publishing the Report if correspondence between observers and recorders can be cut to a minimum. Observers are asked, therefore, always to submit **the description taken in the field**, together with any relevant details of time, habitat, weather conditions and any other circumstances that may be helpful, of the species listed below.

All Divers	Bewick's Swan	Auks
Grebes, other than Great Crested and Little	All Buzzards	Collared Dove
All Petrels	All Harriers	Wryneck
All Shearwaters	Rails and Crakes other than Water Rail	Willow Tit
Shag	Wood Sandpiper	"unusual" Warblers
Hérons, other than common	Stints	Firecrest
All Bitterns	Phalaropes	Shrikes, other than Red Backed
Scaup	All Skuas	Crossbills
Ferruginous Duck	Glaucous Gull	Girl Bunting
Longtailed Duck	Iceland Gull	Lapland Bunting
All Geese	Little Gull	All "out of season"
Whooper Swan	"unusual" Terns	migrants and any other rarity

Finally, the Records Committee wish to thank all who already send in records and invite those who have not contributed to do so, thereby helping to make the *L.B.R.* a comprehensive account of the ornithology of London.

The Year

JANUARY TO MARCH

New Year's Day found London blanketed with snow and for the next few days the weather remained bitterly cold. The dramatic westerly movement, led by Skylarks and Redwings, which began on the last day of 1961 was continued in the first week of the year under review, with more and more species joining in the rush to seek milder conditions. Something like a thousand Great Crested Grebes were gathered at Staines and Queen Mary reservoirs and at Barn Elms 2,500 Tufted Duck and 200 Pochard were massed. Over the Brent 54 Pink-footed Geese were watched heading south-east, while on the patches of open water rested a herd of 19 adult Bewick's Swans and, foraging on the banks nearby, was a single Snow Bunting. During the first days of January large parties of Lapwing were seen flying south over Chislehurst and Weybridge and at Swanscombe the Dunlin flock reached 1,600. Perhaps one of the most remarkable effects of the cold weather was the number of Bullfinches seen, six being an unusually large count for Holland Park as were 40 at Brent reservoir and 50 at Rye Meads, while on the Thames there were a pair of Goosander between Richmond and Teddington and 14 Coot at Millbank. Inner London also produced unusual records at this time; five Woodlarks and nine Long-tailed Tits were seen in Lambeth Palace gardens, and a flock of 17 Chaffinches and another of 13 were reported from the City. Yellowhammers also occurred in small numbers in the central area and at Cuffley, Herts., on January 13th a flock of 200 was exceptionally large, and, on the same date, 75 Moorhens at Ruxley G.P. equally noteworthy. As the very cold weather moderated the big concentrations began to split up but, nevertheless, the tail-end of the cold weather movement brought a Goosander to Silvermere, Surrey and the total of Wigeon at Staines to 300 and at Queen Mary reservoir to 200. At Staines there were 38 Goldeneye on February 7th and a male Long-tailed Duck which remained another fortnight. During February there were seven Black-throated Divers in the area as well as a few Black-necked and Slavonian Grebes. Though Waxwings were present, numbers were smaller than in 1961 but 13 were recorded from Essex and Surrey and, in the latter county, two Great Grey Shrikes were seen as well.

The cold weather of early March brought further unexpected happenings. On the 10th, 38 grey geese were recorded at Staines but even this unusual London visitation was soon overshadowed by the considerable "wreck" of Shags which occurred throughout the country. Cold north easterly winds brought the birds inland and over fifty individuals, nearly all immature birds, were recorded inside our boundary. Many perished in the first days of their arrival, among them one ringed on the Farne Islands last summer. Northern gulls also made fleeting appearances about this time, two being first winter Glaucous and two Iceland. The inclemency of

the weather, however, did not prevent the arrival of Garganey in good numbers towards the end of the month, though spring migrants generally were held back, exceptions being an early Swift, in the second week of April and Turtle Doves a week later, species that are not normally seen along with the first Chiffchaff, Wheatears and Sand Martins as was the case this year. A Ring Ousel briefly showed its white crescent in Regent's Park on the 12th. In the last week of April a marked influx of Lesser Whitethroats brought three into Inner London. From Rainham, in the east, came the only certain record for the year of a Peregrine; while at Staines, in the west, 15 Bar-tailed Godwits were seen in flight on the 27th.

THE BREEDING SEASON

While the threat of toxic chemicals, used both in agriculture and in suburban gardens, is still being investigated on a national scale through analysis of corpses and the Census of Common Breeding Birds, it would be premature to suggest that any tendency towards decrease in some species can be so explained. We can only record increases and decreases and, at the same time, keep a wary eye on future trends.

To catalogue the increases first is to set out the shorter list. Greenfinches were certainly more widespread in suburban gardens and nine Inner London pairs were noted. Lesser Whitethroats, already mentioned as in greater numbers, bred in Epping Forest for the first time since 1958, and a total of at least 15 pairs were reported from the Essex and Surrey sectors combined and here, too, Tree Pipits did better than in 1961.

At Swanscombe six pairs of Ringed Plovers represented a striking upsurge in the breeding population. Perhaps it was no more than mere chance that the Thames should separate the two populations of chats; three pairs of Stonechats bred in Surrey and ten pairs of Whinchats bred in areas north of the river. The Cripplegate Wrens reared a brood again this year and Nuthatches were successful in Holland Park and Kensington Gardens.

Species that showed a reduction in numbers were rather more numerous. Black Redstarts in the City, with only two broods, were the victims of nothing more sinister than the proliferation of glass and concrete. Little Ringed Plovers, whose habitat is certainly not decreasing, fell by five pairs. Redstarts mustered only 31 known nests although this may well be due to a decrease in observers. Black-headed Gulls at Perry Oaks, Nightingales from all areas, Red-backed shrikes and Nightjars from the commons, Wood Warblers, Hawfinches and Kestrels all show a decline though in different degrees. The mention of a solitary pair of Wrynecks in this report may well be one of the last breeding records of a species that has long been in decline. It is a pleasure, however, to report a pair of Sparrow Hawks successful at Weybridge and a Shoveler with six ducklings at King George VI reservoir, the only breeding record of the species in 1962.

OTHER SUMMER RECORDS

On May 3rd an Osprey was seen in Essex, and on the same day the 21 Whinchats in Regent's Park (!) and three at Rye Meads add up to the

highest total for this species on any date in the year. Two very unusual birds were in the area at the end of the first week of June, a Red-footed Falcon at Sevenoaks on the 6th, and a Golden Oriole at Broxbourne on the 7th. The month ended with reports of the first arrival of Crossbills, 25 flying west south west over Regent's Park on June 30th, and by the end of July about 200 of these easily identified birds were distributed in the conifer woods throughout the area. July began with a Kentish Plover at Rainham Marsh on the 1st and continued with more frequent reports of Turnstones on the Thames-side marshes. On the 21st a big hirundine movement was seen at Hershams S.F. probably influenced by heavy rain. A Grey Wagtail was present along the river at Hammersmith for some weeks.

AUTUMN MIGRANTS

One of the earlier autumn migrants was the Temminck's Stint at Sevenoaks on July 25th and by mid-August wader passage was well under way with 35 Common Sandpipers at Swanscombe between the 11th and 20th, seven Wood Sandpipers at Perry Oaks on the 15th, five Spotted Redshanks at Staines on the 15th, 400 Ringed Plover, the largest number ever recorded at Swanscombe, on the 22nd, and, on the 30th, 14 Oystercatchers at Rainham, the biggest flock ever seen in the London Area. On August 28th, nine Whimbrel were seen flying south over Sevenoaks where 40 Black Terns were also noted on the 20th, and these, with the 30 or more at both Staines and Queen Mary reservoirs produced bigger than usual peaks. In this same period, post-breeding flocks of Goldfinches at Rye Meads were 200 strong.

The autumn was remarkable for the number of American species that arrived in the British Isles and London was able to claim two, a Lesser Yellowlegs (our third record) at Staines/Perry Oaks between September 5th and 9th and a Pectoral Sandpiper also at Perry Oaks from September 8th to 16th. Paradoxically, on the latter date an unusual visitor from the north was a Dotterel, the first for eight years and only our third record this century, seen at Girling reservoir. During August and September the vigilant group in Regent's Park totted up 22 Pied Flycatchers. On some of the reservoirs and gravel pits small numbers of Little Gulls appeared about mid-September the last being seen in early October. Though not migrants, the flock of 24 Mandarin on a stubble field at Cobham on September 28th may well have been almost our entire population of this handsome duck. On October 14th, a duck count day, 700 Great Crested Grebes were recorded, again showing the continued improvement in the status of this species. Two unusual records for inland waters were the Purple Sandpiper at Staines on the 13th and the Leach's Petrel at Queen Mary reservoir on the 28th. During the month the first Hooded Crows of the winter made their appearance in Herts and Surrey.

NOVEMBER AND DECEMBER

By November the winter flocks of duck were building up; Teal were in big numbers with over 1,000, and Goldeneye at Queen Mary reservoir

had reached 45, and at Ruislip on the 11th, fifteen Common Scoter were seen flying south-east. On the night of November 8th a vast movement of Redwings, flying low enough to be visible in the light of street lamps, was reported from W. Norwood and Norbury. A count of Golden Plover at London Airport, one of their favourite haunts, reached 300 on the 11th and at Broxbourne on the 16th unusual numbers of Jays, two parties comprising 57 birds, were moving south-east. Three late Chiffchaffs were reported, the last being seen up to December 9th. The month ended with two Rooks seen over Soho Square and a Storm Petrel, which later died, at Woodford Green.

December was a month of fog, frost and snow, bringing with them a rush of interesting, even sensational, records. A flock of 40 Snow Buntings at Swanscombe at the beginning of the month had dwindled to twenty by the year's end, and at the same place there were three Little Stints on the 9th. During late November and early December there had been reports of harriers, three being unspecified and one a Hen Harrier. Bewick's Swans were also present in small numbers, the largest herd being one of ten at Girling reservoir on the 30th. It was not, however, until Christmas week that the onset of snow brought the crop of records that lends a special excitement to winter bird-watching. The identification of both a Spotted Crake and a Great Snipe near Denham on the 23rd was sensational enough to prompt a small group of watchers to keep a close watch on the site. On this same day 14 White-fronted Geese were reported flying south-east over Staines. Observers taking time off from the festivities of Christmas Day reported a Glaucous Gull at Staines and a Buzzard over Sidcup. Two days later, the only Merlin of the year was seen, at Beddington.

Flocks of Lapwing seeking open feeding grounds were moving south-west, the largest being 300 at Denham, 500 at Swanscombe and 1,500 at Rye Meads, and Skylarks, too, were on the move, 700 passing over the Brent. While most species seen were noted in flight as they hurried south-west, others were watched as they paused briefly on their way, among them six Turnstones at Elmers End S.F., three Purple Sandpipers at Staines and ten Siskins in Regent's Park.

This review of the year is brought to a conclusion with a short roll call of the big numbers that make so strong an impact on those fortunate enough to witness them; 100 Goosander at Walton and 60 at the Brent, over a thousand Pochard at Barn Elms and, perhaps the finest sight of all, 100 grey geese at Leatherhead and no less than 250 at Swanscombe.

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- | | | |
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Birds of the London Area, 1962

A REPORT OF THE BIRD LIFE WITHIN TWENTY MILES OF ST. PAUL'S CATHEDRAL

THIS report follows the British Ornithologists' Union's "Check-List of the Birds of Great Britain and Ireland" (1952) based on the Wetmore classification, and the numbers preceding each species refer to that List where the full scientific name will be found. The vernacular names are those adopted by the Editors of *British Birds* magazine as announced in January, 1953 (*B.B.*, 46: 1).

All records are for 1962 except where otherwise stated. The initials following each record refer to the observer(s) responsible for it, whose name(s) may be obtained by reference to the list of contributors on page 9.

The six counties within the circle of twenty miles radius are indicated by their initials, *viz.*:—B=Bucks; E=Essex; H=Herts.; M=Middlesex; K=Kent; S=Surrey. Several of the Lea Valley reservoirs are partly in Middlesex, but all records referring to them are published under Essex, following the policy adopted by W. E. Glegg in his histories of the birds of Essex (1929) and Middlesex (1935). The following abbreviations are also used:—*B.B.*=*British Birds* magazine; *E.B.R.*=*Essex Bird Report*; *L.B.R.*=*London Bird Report*; G.P.=gravel pit; Res.=reservoir; S.F.=sewage farm; N., E., S., and W., are used for the cardinal points of the compass, but are intended only to indicate the general direction of flight; mo=many observers.

An open map of the London Area will be found useful for a full appreciation of many of the records. As the history of some of the species is intended to be continuous, reference to the Society's book *The Birds of the London Area since 1900* and to the systematic list of previous issues of the *L.B.R.* is recommended.

Queen Elizabeth II Res., mentioned in this Report, is the reservoir hitherto known as Walton South.

I Black-throated Diver

- E Nazeing G.P., one from Feb. 10th to Mar. 3rd (BSMs, JCE, RB *et al.*).
 H Hilfield Park Res., one from Feb. 11th to 25th (EHW, BLS, DT). Rye Meads, one on Feb. 8th (LL-E, LR). Stockers Lake, one on Mar. 4th (BPP).
 M Queen Mary Res., one on Feb. 24th (PJO) and one on Nov. 14th (BEC). Staines Res., one on Jan. 28th (DGH, DMP *et al.*), two on Feb. 2nd (PAD, RSB) and thereafter two present until May 5th (RES, JRH) with three on Feb. 11th and 18th, Mar. 17th and 22nd to 25th (mo).

2 Great Northern Diver

- E Walthamstow Res., one from Jan. 27th to Feb. 10th (JF, PAB).
 K Sevenoaks, one on Jan 2nd (JGH, JMH).

4 Red-throated Diver

- K Swanscombe, one on Dec. 30th (AW).

5 Great Crested Grebe

Over 50 pairs were recorded as breeding but the figure is by no means complete. There were 12 pairs at Walthamstow Res., Essex, and a similar number at the gravel pits north of Sevenoaks, Kent, while for the second year running breeding took place at Stoke Newington Res., this time successfully with two pairs rearing five young. Two birds, apparently paired, frequented the lake in Regent's Park from March to early May.

Very large concentrations appeared at the beginning of the year, associated with the onset of hard weather. At Staines, Middx., there were 600 on Jan. 4th and at Queen Mary Res. 500 plus on Jan. 6th, but there is no evidence whether any movement between the reservoirs took place. By Jan. 14th, when there were 678 on the waters included in the wildfowl count, the number at these two localities had fallen to 300-350. On the monthly counts at the end of the year the highest total was about 700 on Oct. 14th.

6 Red-necked Grebe

- M Brent Res., one on Feb. 28th (LAB). Queen Mary Res., one on Jan. 7th (PAD, RSB). Staines Res., single birds from Jan. 27th to Feb. 10th (DGH *et al*) and from Mar. 31st to Apr. 11th one in almost complete summer plumage (mo); one on Sept. 17th (JFC).
 S Walton Res., one on several dates from Mar. 2nd to 25th (mo).

7 Slavonian Grebe

- E Walthamstow Res., one on Dec. 31st (RFS).
 H Hilfield Park Res., one on Feb. 11th (EHW).
 M Kempton Park Res., one on Mar. 3rd (AJC, MJV). Staines Res., one from Jan. 4th to 10th with two present on the 6th and 7th (MC, BEC *et al*), one on Feb. 11th (LAB), one from Apr. 6th to 12th (mo), and two on Nov. 18th (RSB).
 S Walton Res., one from Mar. 10th to 25th (SG, PBL *et al*).

8 Black-necked Grebe

- E Girling Res., two on Jan. 1st (JCE), and one from Sept. 16th to Dec. 31st (JCE, JF). King George V Res., one on Jan. 6th (JF).
 H Hilfield Park Res., one on Aug. 11th (EHW). Rye Meads, one on Oct. 3rd and from the 11th to the 20th (mo).

M Kempton Park, one on Nov. 24th (AJC). King George VI Res., two on Sept. 22nd (LAB, RSB) and one on Dec. 25th (LAB). Queen Mary Res., one on Mar. 17th (JAJ). Staines Res., one from Jan. 5th to 10th (mo), one on Feb. 11th (LAB), one on Aug. 18th (SG), four on Sept. 5th (MJC), eight on the 17th and seven on the 23rd (DGH). Numbers varied from two to eight in the first three weeks of Oct. with two on Nov. 18th and one on Dec. 2nd (mo).

9 Little Grebe

H Rye Meads, the largest spring flock was 30 on Apr. 7th. Ten or 11 pairs bred. In autumn there were flocks of 41 on Sept. 9th, 36 on Oct. 3rd and 18 on the 29th (RMRG, JJW). Two pairs bred at Frogmore, Radlett, and one pair at Old Parkbury (EHW). Two pairs bred at Northaw (TJ).

M Inner London: one or two birds were seen in Kensington Gardens on Oct. 3rd (CHH, CHPF), in Regent's Park from Nov. 25th to Dec. 2nd (RCG, EHW), and in St. James's Park on Feb. 2nd (*Royal Parks Report*) and on Apr. 27th (GHG).

K Flocks of c.12 at Stone Pond on Sept. 9th and 23 at Ruxley on Dec. 26th (FJH).

S Autumn and winter records include seven on the Thames at Molesey on Dec. 17th (WRI), five at Broadwater, Weybridge on Jan. 27th and five at Molesey Res., on Oct. 27th (GHG).

13 Leach's Petrel

M Queen Mary Res., satisfactory details received of one on Oct. 28th which was watched for half an hour being mobbed by gulls (PJSn).

14 Storm Petrel

E Woodford Green, one found exhausted on Nov. 26th died later (κww per SDJB).

19 Fulmar

M King George VI and Staines Res., one, apparently injured, seen close to the water's edge on Mar. 4th and 5th (MC, DMP).

K Swanscombe, one picked up dead under high tension cables on Mar. 31st (JMC).

27 Gannet

K Sevenoaks, one immature found dead on Apr. 7th (*KOS Bull.*).

28 Cormorant

The largest numbers were, as usual, reported from the reservoirs of Middlesex and Surrey in winter. 75 were counted at King George VI Res., on Jan 10th (LAB), while c.70 were considered "more

plentiful than usual" at the Walton group of reservoirs (PBL, JdeRK) where 22 were still present in mid April (GHG).

Records for Kent include one at Ruxley on Jan. 13th (FJA, RC, JC), and one at Dartford on Mar. 4th (KHP). In Herts there were two summer records at Hilfield Park Res., (BLS, HJH, FEM) and at Aldenham five were seen flying over on Aug. 21st (FEM). Over Inner London two seen flying west on Oct. 1st (RBW). At Millbank four flew west on Sept. 11th (GHG) and there was one near Westminster Bridge on Mar. 8th (GT). Single birds were seen on the lakes of Regent's Park on Aug. 11th and Oct. 3rd (RCG), and St. James's Park on Dec. 9th (*Royal Parks Report*).

29 Shag

A "wreck" of Shags occurred during the second week of March when the weather was very cold with strong north easterly winds. The great majority of the records at this time refer to immature birds.

- E Between Mar. 10th and 14th 19 immature birds were reported from Walthamstow Res. Most of these were found dead in the following days but two that survived remained until June 16th (JF, BSMs, PAB, GCG). King George V Res., three found dead and the only adult to be noted was seen on Mar. 17th (BSMs, FR).
- H Between Mar. 13th and 18th the following numbers were reported: two at Hilfield Park Res., were still present at the end of Apr. (EHW); one at Broxbourne, two at Old Parkbury, two at Smallford (TWG) and two at Cheshunt (JJW).
- M Brent Res., four on May 16th. Staines and King George VI Res., one adult and one immature respectively on Jan. 10th (LAB). Highgate, one on Jan. 20th (EHW). Inner London: three reported between Mar. 13th and 15th; one was picked up while walking down the road outside Knightsbridge Barracks (PJH) and was released on the Serpentine where it was photographed by W. H. Dady, see *plate 1* and two found sanctuary there of their own accord. (RFS, CHH, CHFP).
- K Ruxley G. P., six alive and six⁺ dead on Mar. 13th and three more deaths by the 24th (*KOS Bull.*). Sevenoaks, up to four by Mar. 18th and one reported dead on Apr. 7th (JGH, JMH).
- S All records refer to immature birds. Beddington S. F., one dead on Apr. 4th (RSB). Molesey Res., one on Mar. 5th (GHG), one on Mar. 24th was found dead on Apr. 7th (SG, GCG) and another on Apr. 19th (WRI). Castle Moat, Reigate, one on Mar. 19th was found dead on the 27th (ETWK). Walton Res., four on Mar. 17th (SG).

30 Heron

- E Little Parndon, 4 nests (FHJ). Walthamstow Res., 48 occupied nests, a drop of seven on last year (AG).
- H Harefield, 12 on a ploughed field near the R. Colne on June 2nd (EHV).

M Kempton Park, 83 nests (EMG).

S Gatton Park, 18 occupied nests (HB). Richmond Park, none breeding (VFH, BLH). Walton Res., 38 present on July 8th (GHG). Inner London: up to 4 regularly in Regent's Park (DIMW) and occasional visits by one or two birds to the lakes in other parks (RFS, EPB, EHW). Suspected of taking goldfish from the pond in Holland Park (EPB).

DUCKS

This year the practice of covering the whole of the previous winter, even though part comes after the end of the year under review, has been abandoned. The effect of the severe weather was so pronounced that it seems better to await all the records for Jan. to Mar., 1963, rather than to deal now with the monthly wildfowl counts for those months in isolation. Paragraphs in heavy type refer mainly to the counts for the calendar year 1962. Definitions of methods were published in *L.B.R.*, 22: 36-38.

Mandarin

K Keston Ponds, a drake on Feb. 25th and Mar. 25th (AWB). Seven-oaks, three on Aug. 2nd and 30th (*KOS Bull.*).

S Recorded as usual at a number of localities in the north-west of the county, the largest party being one of 24 feeding on grain stubble near Cobham on Sept. 23rd (GHG). A duck and young were seen at Silvermere and on R. Mole near Leatherhead. Beddington, two on three dates in Aug. (BRS). Chessington, a duck on Oct. 11th (DP).

45 Mallard

As the full winter counts are not being discussed now the usual comparison is impossible, but for October to December only the counts were about 11 per cent down on the average of the acceptable counts for this period in the previous five winters. The heaviest concentrations of Mallard are now along the Thames, in Hyde Park and Kensington Gardens and at Queen Mary, Staines and King George VI reservoirs. In a total of about 4,700 on November 18th there were 1,936 on the Thames between Putney and Teddington, 485 in the parks and about 1,000 at the reservoirs mentioned. It is important to remember that the counts do not cover the river above Teddington or below Putney or most of the gravel pits and smaller parks, nor do they include Hilfield Park Res., where there were 395 on the date in question.

Although the Lea valley reservoirs support relatively few Mallard by day, about 900 passed south at Rye Meads on Oct. 21st (RMRG). Both early and late nesting was reported, with the first two eggs laid in St. James's Park on Jan. 20th and 22nd and a newly-hatched brood of ducklings on the Thames off Millbank on July 28th.

46 Teal

The last report (*L.B.R.*, 26: 14-15) noted that the numbers of Teal had increased in the winter of 1961-62. This trend was continued at the end of 1962 when there were 1,030 on the wildfowl counts on Nov. 18th and 943 on Dec. 16th. The rapidity with which this species has taken to the new Queen Elizabeth Res. is well illustrated by the figures for this water. on the above dates.

- M King George VI Res., 585 on Jan. 14th. Inner London, seven pairs in Regent's Park on Mar. 22nd and seven over the Serpentine on Dec. 22nd.
- K Swanscombe Marshes, up to 170 on Jan. 6th, 250 on Mar. 4th and 500 on Dec. 24th. This locality is not included in the figures for the monthly counts.
- S Queen Elizabeth II Res., 117 on Jan. 2nd, *c.* 150 on the 21st and Feb. 10th, 193 on Nov. 18th and 273 on Dec. 16th. Barn Elms Res., *c.* 150 on Mar. 25th and 350 on Dec. 1st. Island Barn Res., 350 on Jan. 7th. It is evident that there was a large influx associated with the cold spell at the end of Dec., 1961, and early Jan., 1962.

47 Garganey

No very early records, the first being of a pair at Bedfont on Mar. 24th (DGH). Seen in Apr. and May at Rainham, Rye Meads (maximum four on Apr. 19th), Barn Elms, King George VI and Queen Mary reservoirs, Ham Moor G. P., and on the Thames at Hammersmith, where there was a drake on May 8th and from May 28th to June 27th. No other breeding season records.

In autumn single birds at three localities between July 28th and Sept. 22nd. Hilfield Park Res., two drakes on Dec. 8th (ASK).

49 Gadwall

- H Hilfield Park Res., a drake on Oct. 13th and 27th and on Dec. 1st (BLS). Rye Meads, five on Oct. 21st. (PFB).
- M Brent Res., a drake on Oct. 13th (LAB). King George VI Res., one on Jan. 14th and three on the 28th, two on Feb. 4th and Mar. 17th Queen Mary Res., a drake from Feb. 24th to May 12th (mo) and a duck on Mar. 18th (MC).
- K Sevenoaks, one present all winter 1961-62 left about Apr. 12th; a duck in Dec. and a drake on the 26th (*KOS Bull.*).
- S Barn Elms Res., maximum in first half of year was 22 on Jan. 20th to 21st (AJC, JG), six remained in May and there were eight on June 24th (PJSn): end of year maximum of 21 on Dec. 23rd. Hershams SF., one on Jan 6th. R. Thames, one between Richmond and Kew on Mar. 18th and 20 off Fulham on Nov. 11th. (PJSn).

50 Wigeon

The largest numbers are usually in the early part of the year and these were discussed in the last report. Highest total at the end of the year was 180 on December 16th.

- H Hilfield Park Res., maxima 36 on Jan. 14th and 50 on Dec. 16th (BLS).
- M/S In the wildfowl count total of 572 on Feb. 18th *c.* 300 were at Staines and *c.* 200 at Queen Elizabeth II Res. The last seen in spring was a drake at King George VI Res. on May 25th. Inner London, a pair in Regent's Park, January to March.
- K Elmers End S.F., 50 plus flew over on Dec. 28th (AJG, DS, RNS). Sevenoaks G.Ps., 23 on Jan. 26th (*KOS Bull.*).

52 Pintail

- E Girling Res., two drakes on Jan. 14th. Nazeing G.Ps, a duck on Dec. 2nd. Walthamstow Res., two on Jan. 28th and a drake on Mar. 17th.
- H Hilfield Park Res., a drake on Jan. 7th and two pairs on the 28th.
- M King George VI and Staines Res., three pairs on Jan. 14th and one bird on various dates up to Apr. 8th; a drake on Oct. 14th, three on Nov. 11th and one on various other dates to the end of the year.
- K Swanscombe, two on Mar. 24th, a drake on Dec. 28th and a duck on the 30th.
- S Syon Reach, one on Feb. 3rd and 18th. Walton Res., a drake on Mar. 4th. One flying over on Dec. 16th.

53 Shoveler

In January to February numbers not exceeding ten at Girling, Hilfield Park, Island Barn and King George VI Res., at Broxbourne and Ruxley G.Ps. and at Crayford and Swanscombe Marshes. Larger flocks at Queen Mary and Staines Res., with a maximum at the former of 100 plus on Feb. 17th. More widely seen on return migration in March to April with a total of 106 on Mar. 18th on the wildfowl count and another 14 at Broxbourne G.P.

In autumn up to 16 at Rainham from July 29th to Aug. 13th. Staines Res., only 12 on Sept. 17th but 110 on 23rd and 120 on Oct. 3rd. Queen Mary Res., *c.* 50 on Oct. 21st and to the end of the year but no large numbers elsewhere.

- M King George VI Res., a duck with six ducklings on June 16th (DGH).

54 Red-crested Pochard

- E Nazeing G.P., a duck on Sept. 16th (RAB).
- M Stoke Newington Res., from one to three on five dates from Aug. 1st to Sept. 21st (DIMW).
- S Barn Elms Res., one from July 8th to 29th (EF, PJSn).
- While these probably refer to the full-winged birds from the London

parks, small numbers which appear annually on the outer Essex reservoirs are thought to come from the flocks which occur in Holland at this season, and there is therefore always a possibility of some wild birds appearing in the London Area.

55 Scaup

- E Girling Res., a duck on Nov. 3rd (JF). Nazeing G.P., two from Dec. 2nd to 29th (BSMs). Walthamstow Res., one from Oct. 27th to Dec. 29th (JF).
- H Hilfield Park Res., one on Jan. 7th (EHW). Rye Meads, a duck on Dec. 1st (RMRG).
- M Brent Res., one on Jan. 4th (DT), two on Oct. 14th and one on 20th, Nov. 11th to 14th and Dec. 28th (mo). Queen Mary Res., one to two in Jan. and Feb. (BEC, PJO *et al*). Staines Res., two on Jan. 10th and one from Feb. 17th to Apr. 14th (mo); a drake on Aug. 21st (JRH), a duck on Sept. 16th (JAJ), a drake on 23rd (DGH), four drakes on Dec. 8th (RSB) and a duck on some other dates November to December. Stoke Newington Res., a duck on Apr. 29th (JF). Inner London: Regent's Park, a duck and a drake, Nov. 10th (DIMW).
- S Barn Elms Res., present until Apr. 29th with a maximum of seven on Feb. 3rd (LR, LRS) and 16th (AJC, RLR) and three still there as late as Apr. 27th (DCG); a duck on Oct. 27th (MDK) and one to two from Nov. 24th to Dec. 26th. Walton Res., one to two from Jan. 6th to Mar. 21st (mo), and one on Oct. 4th (JdeRK, PBL).

56 Tufted Duck

In the last report an increase in numbers in the winter of 1961-62 compared with 1960-61 was noted (*L.B.R.*, 26:18). While this probably owed something to the cold front at the turn of the year, Tufted Ducks had been particularly numerous on Dec. 17th, 1961, well before the onset of cold weather, though still substantially below the level in the peak winters of 1954-55 to 1959-60. Very large numbers appeared with the cold weather, between the monthly count dates, and at Barn Elms Res. there were *c.* 2,500 on Jan. 6th compared with only 450 a month previously. By the middle of January they were down again to *c.* 1,040.

The usual late summer and autumn flocks appeared at Staines, where there were 600 on July 29th and 800 on Oct. 21st. and at Walton, where the highest count was 972 on Sept. 2nd. Though these gatherings were not reflected in the monthly counts these still showed an improvement on 1960 and 1961 but with a marked drop in mid-Dec.

Breeding season records:—

- B Poyle G.Ps., two to three pairs.
- E Fishers Green G.P., one pair. Nazeing G.P., four pairs. Walthamstow Res., eleven pairs.

- H Maple Cross G.P., three broods. Old Parkbury G.P., three pairs bred. Troy Mill, one pair bred.
- M Ashford G.Ps., one to two pairs. Charlton G.P., two pairs. Finsbury Park, four pairs with 22 ducklings. Queen Mary Res., one pair nested. Shepperton G.P., two to three pairs. Stain Hill Res., one pair nested. Staines Res., adult seen with four or five young. Inner London: Hyde Park and Kensington Gardens, seven pairs in July but only one young seen; St. James's Park, estimated 37 young reared from 15 broods.
- K Ruxley G.P., one pair with four ducklings in Aug. Several pairs at Darenth, Lullingstone and Sundridge G.Ps., in spring but no evidence of breeding recorded.
- S Barn Elms Res., 35 adults and four broods. Gatton Park, two pairs bred. Godstone, three pairs to the end of May. Hurlingham Club, three broods. Walton Res., two scrapes with one egg each on June 4th. Richmond Park, one pair bred.

57 Pochard

Following the cold spell over the turn of the year 1961-62 there were *c.* 2,000 at Barn Elms on Jan. 6th and flocks of about 100 at Stoke Newington and Swanscombe at the same time. By Jan. 14th, on the monthly wildfowl count, the flock at Barn Elms was down to *c.* 1,200 and the total was 1,598. At the end of the year there was another build-up with a total of 1,364 on Dec. 16th of which 165 were at Barn Elms Res. With the arrival of the cold front there were 1,000 plus at those reservoirs on Dec. 29th.

- M Staines Res., an autumn flock of *c.* 200 on Aug. 18th. Inner London: one pair bred in Hyde Park and Kensington Gardens.

Aythya hybrids

As usual there have been several hybrids, the difficulties being well illustrated by the mating in Osterley Park of a drake Tufted Duck with two female Pochard; eight young were reared of which only three remained at the end of the year (DT). There was a hybrid at Staines Res. on Sept. 17th (JFC). At Barn Elms Res., there was one in the early months of the year resembling a drake Scaup but with under and upper parts mottled brownish (PJS_n).

60 Goldeneye

- E Lea valley reservoirs, up to *c.* 30 in Jan. to Feb. and 18 on Dec. 16th. Nazeing G.P., two on Mar. 24th and Apr. 7th.
- H Hilfield Park Res., two on Mar. 25th to 26th and a drake on Sept. 29th and Oct. 27th. Old Parkbury, a duck on Feb. 17th. Pynesfield G.P., a duck on Dec. 2nd.
- M Brent Res., one on Oct. 21st and from Nov. 11th to Dec. 9th. Highgate Ponds, one on Jan. 27th to 28th. Kempton Park, up to seven

in Feb. and six in Dec. Queen Mary Res., in good numbers Jan. to Apr. 1st and from Oct. 14th; maxima 38 on Mar. 18th and 45 on Nov. 17th. Staines Res., 20 to 30 on most dates up to Apr. 8th, but 38 on Feb. 7th and last seen on Apr. 21st when there were at least four; first returned Oct. 13th and up to four until mid-Nov. rising to 15 on Dec. 23rd.

- K Ruxley G.P., a duck from Feb. 25th to Mar. 4th. Sevenoaks, one in Jan., Feb., Mar., and Nov. Sunridge G.P., one on Mar. 11th. Swanscombe, a duck on Dec. 28th.
- S Barn Elms Res., one on Feb. 18th and three on Mar. 3rd. Gatton Park, one on Feb. 11th. Ham Moor G.P., one on Feb. 25th. Walton Res., maxima 13 on Mar. 28th with 11 still there on Apr. 7th. R. Thames, three between Richmond and Kew on Sept. 16th and four on Oct. 14th; four near Barn Elms on Dec. 16th. Present at Barn Elms and Walton from end Nov. numbers rising to nine at Walton on Dec. 31st.

61 Long-tailed Duck

- M Staines Res., the bird first seen on Dec. 31st, 1961, which was probably a first-winter drake, was seen up to Feb. 24th. From Mar. 3rd to 24th there was an adult drake in winter plumage with some traces of summer plumage beginning to appear.

64 Common Scoter

- E King George V Res., a drake on Apr. 30th (JCE). Lea valley reservoirs, two ducks from Nov. 17th to 24th moved about from one water to another (JF, RFS).
- H Cassiobury Park, a duck on Apr. 2nd, 3rd and 20th (KL, JDM). Hilfield Park Res., a pair on Mar. 25th (EHW).
- M Brent Res., two drakes on Aug. 7th (LAB). Ruislip, 15 flew over S.E. on Nov. 11th (BPP) and were also seen at Staines Res. (mo). Staines, a drake on Mar. 11th and Apr. 7th (mo).
- K Ruxley G.P., a duck from Apr. 5th to 7th (JCI, RC, FJH, AW). Swanscombe, five on Apr. 11th (MB, JC).
- S Barn Elms Res., one on Apr. 7th (AGV, LR, LRS).

69 Red-breasted Merganser

- E King George V Res., one on Mar. 17th and 21st (BSMs, FR).
- H Hilfield Park Res., one on Dec. 29th (BLS).
- M Queen Mary Res., a drake on Jan. 20th (PAD, RSB) and one on Mar. 3rd (BEC). Staines Res., up to five in Jan., one in Feb., two in Mar. and one last seen on Apr. 20th (mo); a drake on Nov. 18th (JRH), two on 24th (RSB, DGH, DMP), six on Dec. 2nd (FMG) and two until the end of the year.

70 **Goosander**

As already noted in the last report (*L.B.R.*, 26: 21) no very large flocks appeared in Jan. to Mar. During this period there were usually *c.* 50 at Staines with a maximum of *c.* 80 on Feb. 4th and 20th and 40 to 80 at Walton with a peak of 100 on Feb. 16th. At Island Barn Res., the maximum was 31 on Feb. 16th and at Queen Mary Res. 25 on Jan. 6th and Mar. 4th. Elsewhere small parties, nowhere exceeding 16, were seen at Barn Elms, Hampton, Hilfield Park, Kempton Park, Stoke Newington and the Lea valley reservoirs and at Broxbourne, Nazeing and Sevenoaks gravel pits. More unusual localities were the Thames between Richmond and Teddington, where one was seen in Jan. and two in Mar., and at Silvermere in Surrey, where there was one on Feb. 3rd and two on Mar. 11th. The Staines flock still numbered 30 on Apr. 6th and the last one was seen on the 27th. An injured duck summered in the Lea valley and a drake was seen on King George VI Res. from June 30th to July 7th. There were three at Barn Elms on Sept. 9th.

At the end of the year Goosander are never so widespread as in the early months. At Staines there were 23 as early as Nov. 18th and at Queen Elizabeth II Res. *c.* 12 on the 15th. Before and during the arrival of the cold front at the end of Dec. numbers at Walton increased from 31 on Dec. 16th to 50 plus on the 24th and *c.* 100 on the 28th. At Brent Res., 60 flew south on Dec. 30th and at Greenford *c.* 65 were seen flying west on the same date, when the hard weather movement was also well illustrated by one on a pool of water at Fetcham. At Staines Res., however, not more than 40 were seen during this period.

71 **Smew**

Smew move about so much between the reservoirs that only counts on the same date have any real bearing on the total for the Area. Peak numbers in Jan. to Mar. were 21 at Barn Elms on Jan. 7th, 29 at Brent Res. on Jan. 20th, 50 plus at Staines Res. on Jan. 10th, 23 at Stoke Newington on Jan. 27th and 18 at Walthamstow Res. on Jan. 6th. At Staines there were usually from 25 to 50 during this period but elsewhere there were big fluctuations and it is doubtful if the total ever much exceeded 100. Small numbers were seen at Hampton, Hilfield Park, Kempton Park, Lonsdale Road, Walton, and the other Lea valley reservoirs and at Broxbourne, Nazeing and Sevenoaks gravel pits. There were three on Hampstead Ponds on Mar. 17th, and the last one was at Staines on Apr. 20th. Inner London: a drake on the Serpentine on Jan. 10th, a red-headed bird in Regent's Park on Feb. 13th and a drake in St. James's Park on Feb. 9th and 15th. At the end of the year there had only been before Dec. 23rd two at Brent Res. on Nov. 17th and one later, one at Staines on Dec. 9th, two in Regent's Park on the 10th and six in Kempton Park on the 16th. On Dec. 23rd there were 21 at Staines

and between then and the end of the year there were flocks of 13 at Kempton Park on the 24th, 13 at Barn Elms on the 29th and 24 at Staines Moor on the 29th. There were also ones and twos at several localities where they are seldom seen such as Ruxley, Rye Meads, Sevenoaks and Swanscombe. It is evident that as with other species the cold front caused a widespread influx.

73 **Shelduck**

For convenience records for opposite sides of the Thames are grouped. At Rainham on the Essex side up to 14 were seen in March, 24 on Apr. 13th and smaller numbers in May and June, while at Swanscombe on the Kent side there was a peak in the early months of 72 on Feb. 24th. Two pairs stayed on into the spring and one pair had nine young on June 10th, a date which makes it certain that they had bred in the vicinity. From 25 to 30 were seen at Rainham in August.

In the Lea valley one to two birds were seen on various dates in Jan. to Apr. During these months one was seen at Brent Res. on Jan 4th, three on Apr. 6th and 13 on the 24th. One flew over Staines on Mar. 11th and there were three on Apr. 11th and eight on the 12th. There were also two at Queen Mary Res. on the 7th. In May one flew N.E. over Stanwell on the 5th and there was one on the Thames at Barn Elms from May 21st to June 9th. From late summer onwards one or two were to be seen there, on the Thames, at Walton or Island Barn Res., and as remarked last year it seems probable that these are of captive origin.

Apart from these one or two and the birds on the estuary the only ones in the moult migration period were two at Brent Res. on Aug. 18th and one flying west over Richmond Park on Sept. 8th. More were seen in Nov. and Dec. On Nov. 11th four appeared at Rye Meads and seven at Queen Mary Res. There were two at Hilfield Park Res on Dec. 9th, one at Elmers End S.F. on Dec. 17th and 23rd and in the cold front period one flew N.E. over Chislehurst on the 23rd when there were again seven at Queen Mary Res; there was one at Staines on the 29th and one flew over Beddington on the 30th.

75 **Grey Lag-Goose**

K/S There are many semi-domesticated birds now being kept in the south of the Area, and these almost certainly explain records at Chipstead and Woldingham in December.

76 **White-fronted Goose**

H Rye Meads, one circled and flew off south on Mar. 20th (LL-E).
 M Brent Res., one on Mar. 5th (LAB). Hampton Res., two on Dec. 23rd flew off N.N.W. at 15.40 hours (sg). Hampstead Heath, one on Jan. 7th (DEDC). Staines Res., 14 on Dec. 23rd flew off S.E. at 13.00 hours (sg).

78 Pink-footed Goose

M Brent Res., 54 on Jan. 6th flew S.E. (LAB).

Geese *sp.*

- E Walthamstow Res., 53 grey geese on Jan. 27th (PAB).
 M Finsbury Park, 20 flew south at 11.30 hours on Jan. 1st (DIMW).
 Greenford, 13 grey geese on Dec. 28th (JRH).
 K Swanscombe, *c.* 250 grey geese flying west on Dec. 30th (AW).
 S Leatherhead, *c.* 100 flew west at 00.30 hours on Dec. 30th (TLB).
 Richmond Park, *c.* 25 grey geese flew N.W. on Dec. 30th (BLH, VFH).
 Weybridge, 11 grey geese flew N. on Oct. 21st (GHG).

80 Brent Goose

- H Hilfield Park Res., two of the dark-breasted form, *Branta b. bernicla*, on Nov. 11th were extremely wild (BLS).
 M Staines Res., 38 on Mar. 10th (RSB, PAD) makes a unique record for the London Area.

82 Canada Goose

- B Iver, one flying over on Apr. 26th. Wraysbury G.P., eight adults and 11 juveniles on June 17th.
 E Fishers Green G.P., one from Aug. 20th to Nov. 4th. Walthamstow Res., one on Apr. 7th. Wanstead, one on Dec. 9th.
 H Aldenham Res., two on Apr. 20th. West Hyde G.P., three on Mar. 31st and May 4th.
 M Gunnersbury Park, two on Apr. 14th. Harefield Moor G.P., two on Mar. 31st and June 2nd. Ruislip, five on May 5th. Southall, one on Mar. 24th. Staines, two on Apr. 12th. Inner London: three pairs raised 14 young in St. James's Park and all had left by early Dec.
 K Chipstead, birds have been introduced recently to the gravel pits in this district and there were, for example, 46 on July 29th and 59 on Dec. 12th. Ruxley, seven on Mar. 30th and one on July 28th.
 S Fetcham, 10 on Apr. 9th. Godstone, two from Mar. 31st to Apr. 9th. Painshill Park, eight adults and a well-grown gosling on June 3rd. Queen Elizabeth II Res., two on Apr. 1st. Weybridge, 12 flew N.W. on Feb. 7th.

84 Mute Swan

The following figures for the waters included in the wildfowl counts are given for comparison with those in previous years:—

	<i>Sept. 16</i>	<i>Oct. 14</i>	<i>Nov. 18</i>	<i>Dec. 16</i>	<i>Jan. 13</i>	<i>Feb. 17</i>	<i>Mar. 17</i>
1962-63	214	227	187	278	282	189	189

85 Whooper Swan

- S East Molesey, one or more heard "trumpeting" flying over just after dusk on Feb. 18th (PJO). The observer had heard the call of Bewick's Swan only the previous day.

86 Bewick's Swan

- E Girling Res., ten adults on Dec. 30th (JCE). Nazeing G.P., two adults and two juveniles on Oct. 21st (JCE). Walthamstow Res., one on Nov. 27th (TK).
- H Broxbourne, two adults and two juveniles on Oct. 26th (RB). Rye Meads, one on Jan 5th (JHB) and five on Oct. 4th (JC, BSN, BLS).
- M Brent Res., 19 adults on Jan. 5th (LAB).
- S Queen Elizabeth II Res., five from Feb. 22nd to Mar. 4th (EJC, GCG, WRI).

91 Buzzard

- E Rainham, one on Oct. 3rd (JHS).
- M Inner London: Aldersgate, one seen and heard calling as it was mobbed by Black-headed Gulls (EHW), and one over Lambeth Bridge on Feb. 2nd being similarly mobbed (GHG).
- K Sidcup, one on Dec. 25th (JC).

93 Sparrow Hawk

All records are summarized. Surrey remains the stronghold of the species but the reduction in records, noted last year, continues. Only one breeding pair was reported.

- E Epping Forest, one from mid-March to mid-April (FR). South Weald, a cock on Mar. 23rd (AFH).
- M Brent Res., one on July 22nd (FR). Bushy Park, a cock harrying Linnets on May 12th (GHG). Ruislip, single birds on Dec. 8th, 10th and 15th (IGJ, BPP), a cock on three dates in January, February and March, and a hen on two dates in Mar. (BPP). Inner London: Finsbury Park, one on Dec. 10th (DIMW) and a hen in St. James's Park on Feb. 18th (*Royal Parks Report*).
- K West Wickham, one on Sept. 13th (DH).
- S Sightings reported from 15 localities on 18 dates: four in Jan., two in Feb., three in Mar., Apr. and Aug., one in Sept., Oct. and Nov. A pair bred at Weybridge (GHG).

Harrier sp.

- E Rainham, one on Nov. 18th (REFP, EP).
- M Osterley Park, a "ring-tail" flying east on Nov. 11th (DMP, DGH). Staines Moor, one on Dec. 29th (RSB, DMP, DGH).

100 Hen Harrier

- S An adult cock was twice seen in flight over the North Downs on Dec. 2nd (EHP).

103 Osprey

- E Observations at King George V Res., and Theydon Bois in the late afternoon of May 2nd probably refer to the same bird as that seen at Hanningfield (outside our Area) in the morning. (JCE, GD *per* MTP).

104 Hobby

No breeding records received.

- H Rye Meads, one from Aug. 4th to 6th (TWG).
 B Near Fulmer, one on July 7th (DGH).
 M Ashford G.P., one on July 18th (BEC, JFC). Osterley Park, one on Aug. 21st (DGH). Perry Oaks S.F., one on Aug. 18th (PRC). Queen Mary Res., one on Sept. 4th (BEC, JFC). Staines Res., one on June 2nd (PAD, RSB, RES) and one on Aug. 22nd (BEC, JFC).
 S Esher Common, a pair on May 6th (PJO) and single birds in July and Aug. (PJKB, AG). Pollards Hill, one on June 4th (RSB). Weybridge, one on June 24th and a cock mobbed by Swallows on July 21st (GHG).

105 Peregrine

- E Rainham, one flushed from a dyke on Apr. 24th (AFH).

107 Merlin

- S Beddington S.F., a hen on Dec. 27th (RSB).

108 Red-footed Falcon

- K Sevenoaks, a hen on June 6th. Details of identification have been accepted by *B.B.* (JGH, JMH).

110 Kestrel

The paucity of records this year suggests that the suspected decrease in the number of Kestrels reported from many parts of the country (*B.B.* 56:4) applies also to our Area. All records for 1963, particularly information on the decline of the species or its absence from localities where it was previously known, would be of great value.

Breeding season records are given.

- E Reported only from Dagenham and Rainham (mo).
 H Stockers Lake and Springwell G.P., a pair at each locality in Apr. (IGJ).
 K Elmers End S.F., a pair bred (PM). Farnborough, a pair bred, success unknown (PMW).
 S Dulwich Common, a pair reared three young (HEP). Whyteleafe, a pair possibly bred (RD). BMH and FJH noted that there was a decrease of 50% in the numbers present at Hackbridge and Ashstead Woods area in the period July to Dec. 1962, compared with the same period in 1961.

115 Red-legged Partridge

Very few records have been received, with the result that it is impossible to present a fair picture of the status of this species. Observers are asked to send in all records for 1963.

120 Water Rail

- E Single birds at Nazeing G.P., Rainham, Sewardstone and Walthamstow Res., from Jan. to Apr. and in Nov. and Dec. (mo).
- H Single birds at Napsbury on July 4th (EHW), Northaw from Oct. to Apr. (TJ, JJ), Maple Cross on Sept. 9th (KRJ), Old Parkbury on Mar. 3rd (EHW) and Stockers Lake in Feb., Mar. and Apr. (MC, BPP).
- B Near Denham, at least four on Dec. 23rd (DGH).
- M One to three birds reported from 11 localities between Jan. and May and Oct. to Dec. (mo). No breeding records.
- K Ruxley G.P., up to three present from Jan. to Apr. (FJH, PMW, RC, JC), and one or two birds at six other localities in the winter months.
- S Largest numbers seen were six to eight at Beddington S.F. in Nov. and Dec. (KCO), four at Leatherhead Cress Beds on Jan. 14th (GMC), three at Beddington G.P. on Aug. 24th, and three at Hersham S.F. on Jan. 13th. Reported from 11 localities in the county.

121 Spotted Crake

- B Near Denham, one on Dec. 23rd (DGH).

126 Moorhen

- K Ruxley G.P., up to 75, an unusually large concentration of numbers, on Jan. 13th (FJH).

127 Coot

Figures for the highest counts only are given.

- E Girling Res., 356 on Oct. 14th (JCE).
- H Hilfield Park Res., 560 on Jan. 7th, 320 on Aug. 25th and 366 on Dec. 29th (BLS). Maple Cross, c. 300 on Jan. 14th (KRG), Rye Meads, 141 on Feb. 3rd (RMRG).
- M Staines Res., c. 500 on Oct. 7th (PRC), Kempton Res., 395 on Jan. 14th.
- K Ruxley G.P., c. 300 on Jan. 13th (RC, JCO). A bird found shot on Jan 16th had been ringed at Abberton Res., in Dec. 1957.
- S Walton Res., 268 on Sept. 27th (GHG).
Inner London: The unusually high number of 14 seen on the Thames at Millbank on Jan. 1st (GHG). Highest total was c. 100 on the Serpentine on Jan. 2nd (CHH, CHFP).

131 Oystercatcher

- E Rainham, single birds on Aug. 7th, 21st, 25th and 29th, and the remarkable number of 14 on Aug. 30th, the largest party so far recorded in the Area (AFH, BK, BJK, KN).
- H Hilfield Park Res., one on Feb. 18th and 24th (BLS, EHW).
- M Queen Mary Res., two on Apr. 7th, one on Aug. 9th (RSB, PAD, AQ). Staines Res., one on Mar. 11th, May 5th and Sept. 1st (BEC, JRH, TK, PJS). King George VI Res., one on Dec. 16th (BB).

- K Sevenoaks, one on Mar. 11th (*KOS Bull.*).
 S Beddington S.F., one on Jan. 13th and Feb. 21st (BRS).

133 Lapwing

In contrast to 1961 both the summer and hard-weather movements were, judging by the records submitted, less noticeable and the numbers fewer. At the beginning of the year on Jan. 1st and 2nd there were *c.* 90 flying S. over Chislehurst, Kent, and 120 S. over Weybridge, Surrey, respectively. On Feb. 17th *c.* 300 passed N.W. over Dartford Marshes, Kent, and on Feb. 26th *c.* 190 flew S.W. over Northwood Hills, Middlesex. The summer movements reported were negligible and do not warrant mention in detail.

Passage was more obvious in the autumn with a westerly movement of *c.* 200 at Radlett, Herts., in 1½ hours, on Oct. 6th, and *c.* 70 going S. near Gatwick, Surrey, on the 9th. November produced little movement of note, but on Dec. 3rd there was a marked S.W. passage over Chislehurst from 09.00 to 14.00 hours; on Dec. 6th, 606 passed S.S.W. over Sanderstead, Surrey, in 2½ hours, and on Dec. 9th a total of 300 went N.W. over Queen Mary Res., Middlesex, in parties. The real weather movements, however, came later in the month. On Dec. 24th, 300 went S.W. over Denham, Bucks; on the 27th there were 1,500 at Rye Meads, Herts., all of which had gone by the 29th; on the 28th, 500 plus passed over Swanscombe Marshes, Kent, to the S. in five flocks; and on the 29th at least four flocks went over Chislehurst towards the S.W. between 11.00 to 14.15 hours.

134 Ringed Plover

Spring passage was first recorded on Mar. 17th when there were seven at Queen Elizabeth II Res., Surrey, and continued until June 30th (one at Rainham, Essex). The maximum numbers were 15 at Swanscombe Marshes, Kent, on May 13th, far fewer than in the corresponding period in 1961. Autumn passage was recorded from July 7th with records from Perry Oaks S.F., Middlesex, and Walton-on-Thames, Surrey, until Oct. 13th when one was present at Perry Oaks S.F. As in 1961 the maximum numbers were at Swanscombe Marshes with *c.* 400 on Aug. 22nd (CAT).

Details of winter and breeding records are given below.

- E A nest with 4 eggs at Rainham on Apr. 28th was later flooded out (BK). A party of five were seen there on Feb. 18th (REFP).
 M Mill Hill, one on a bull-dozed field on Dec. 26th (EHW).
 K Swanscombe Marshes, 52 at high tide on Jan. 6th, 10 on Feb. 24th, *c.* 20 on Dec. 2nd and 50 on Dec. 9th and 16th (BEC, JC, JFC, DJM, KHP). Among the summering birds five, perhaps six, pairs bred. (FJH).
 S Holmethorpe G.P., one on Dec. 8th (DW).

135 Little Ringed Plover

About 28 pairs summered in the Area, a decrease on the 1961 total. Twenty pairs are known to have bred or attempted to do so, and some of the remaining pairs may have done so.

- B Two pairs present at one site in May and June (PJS).
 - E Seven pairs at four sites, of which one pair at least did not breed (JCE, CES).
 - H Four pairs present at two sites, one pair definitely did not breed and 6 juveniles at the other site were presumed to have been bred locally (MC, HCD, AEG, JJJ, RMRG).
 - M No definite evidence of breeding, but an adult and a juvenile were seen at a site in July (CMV).
 - K Four pairs at two sites (HG, FJH).
 - S Eleven pairs on five sites, of which at least seven pairs bred or attempted to do so (GHG, WRI, DP, RLR, RNFS).
- The maximum numbers reported in the autumn were 15 at Rye Meads, Herts., on July 15th (RMRG).

136 Kentish Plover

- E Rainham Marsh, a male on July 1st (AFH).

139 Grey Plover

- E Rainham Marsh, one on Apr. 14th (BK, BJK).
- M Perry Oaks S.F., one on May 12th (RSB, PAD).

140 Golden Plover

There were again no definite records of spring passage, although there were *c.* 50 at London Airport on Apr. 15th (DGH). The first autumn birds were six flying over Walton Res., Surrey, on Oct. 14th (PBL), and 25 to 30 at Radlett, Herts., on Oct. 20th (MD). Maximum winter figures are given below.

- E Theydon Mount, *c.* 250 on Mar. 16th (AFH).
- H Shenleybury, up to 90 in Nov. and Dec. (BLS, EHW). Rye Meads, 150 on Dec. 27th (RMRG).
- M London Airport, *c.* 300 on Nov. 11th (DGH, DMP).
- K Stone Marshes, about 8 on Feb. 11th (KHP).
- S Pollards Hill, 18 on Mar. 8th (RSB).

142 Dotterel

- E Girling Res., one on Sept. 16th (JCE) is the third record for the London Area and the first since 1955 (see *L.B.R.* 1955: 17).

143 Turnstone

A considerable increase in records compared with 1961.

- E Girling Res., an adult on July 29th and a juvenile on Aug. 19th (JCE). Rainham Marsh, three from July 27th-31st (AFH), four on Aug. 7th, one on Aug. 15th and three on Aug. 30th (BK, BJK).

- M Perry Oaks S.F., two on June 2nd (RSB), one from Aug. 8th to 11th, up to three on at least nine dates from Sept. 2nd to 16th, but four on Sept. 13th (many observers). Queen Mary Res., two on July 28th, three on Aug. 8th, one on Aug. 25th, and three on Sept. 8th (RSB, BEC, GCG). Staines Res., three on May 12th and one on the 13th, one on Aug. 12th, five on Sept. 8th and one on 9th to 10th (MC, PRC, DGH, JRH).
- K Swanscombe Marshes, two on May 26th to 27th (KOS), and one on Sept. 8th (KCO). Dartford Marshes, one on Aug. 18th (KHP). Elmers End S.F., six feeding on a wet field on Dec. 28th flew off to the N. when disturbed (AJG).
- S Barn Elms Res., one on Aug. 19th and 22nd, and two on 24th (RSB, PRC, FCR). One seen by the Thames at Fulham Bridge on Aug. 19th (PRC) was probably the Barn Elms bird. Walton Res., one on Apr. 29th (BY), and three on Sept. 9th (DP).

145 Snipe

The only breeding record received was that of about five pairs at Rye Meads, Herts. (RMRG). Observers are asked to report all breeding records in future years. The maximum winter numbers are shown below.

- H Rye Meads, 150 from mid-January to February (RMRG).
- M Perry Oaks S.F., up to 100 in Oct. and Nov. (AJC, BEC).
- K Elmers End S.F., *c.* 350 on Jan. 27th, and *c.* 400 on Dec. 29th (AJG, PM). One ringed at Elmers End S.F. on Feb. 4th was recovered at Isigny-sur-Mer, France, on Nov. 19th.
- S Beddington S.F., *c.* 1,000 maximum in Jan. and Feb., and *c.* 5,000 on Dec. 26th (BRS).

146 Great Snipe

- B One was present at a locality near Denham on Dec. 23rd to 24th (MC, DGH, DMP).

147 Jack Snipe

As in 1961, the only large numbers reported were at Elmers End S.F., Kent, with 15 on Jan. 27th, 20 on Mar. 4th, and 30 on Dec. 28th (PM, RNFS). There was the usual sprinkling of records of birds at scattered localities in April.

148 Woodcock

Records for the breeding season are given in full.

- M Perivale Wood, one on May 6th (PMS, EHW).
- K Westerham, roding seen three times on June 2nd, one bird only (WGT).
- S Bookham Common, two roding on May 31st (GB). Esher Common, two or three roding on June 8th (BEC, JFC, AQ). Addington, one roding on Apr. 1st (DS). Fetcham Downs, a pair roding on May 11th and 29th (MLC, BH, FJH). Mickleham, one or two at Juniper Top

on May 24th (RHDY). Princes Coverts, one roding on June 6th (SG, DP). Walton golf course, a pair roding on June 10th (RSB). Walton Heath, one on June 19th and 23rd (AJH, KDGM).

150 Curlew

The number of localities at which this species was seen in each month is given below.

<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>May</i>	<i>June</i>
2	2	—	3	3	1
<i>July</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>
11	5	3	2	—	4

The autumn passage commenced on July 1st and the maximum numbers were 12 going S.W. over Weybridge, Surrey, on July 18th, the same number at King George VI Res., Middlesex, on Aug. 6th, and about 50 calling over Ashstead, Surrey, at 23,00 hours on Oct. 4th.

151 Whimbrel

There were spring records from six localities on dates extending from Apr. 21st to May 11th, the maximum numbers being nine at Nazeing Meads G.P., Essex, on May 6th. Autumn occurrences were reported from 14 localities between July 4th and Oct. 28th, the maximum being nine going S. over Sevenoaks, Kent, on Aug. 28th.

154 Black-tailed Godwit

E Fishers Green G.P., one on May 20th (JCE). Rainham Marsh, one on Aug. 7th to 8th (MJA).

H Rye Meads, one from July 15th to 17th (RMRG).

155 Bar-tailed Godwit

E Nazeing G.P., one flying N. on Dec. 27th (BSMs).

M Staines Res., a party of 15 flying E. on Apr. 27th (JRH).

156 Green Sandpiper

The number of localities at which this species occurred in each month is given below.

<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>May</i>	<i>June</i>
4	4	8	7	—	2
<i>July</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>
7	15	11	6	4	6

In comparison with 1961 the main autumn passage was a little later and the species was less widespread in December. The maximum numbers were eight at Rye Meads, Herts, on Aug. 4th and the same number at Maple Cross on Aug. 19th.

157 Wood Sandpiper

There were no spring records. Autumn passage commenced on July 7th and continued until Sept. 15th, with the maximum movement in August when there were records from 13 localities with a maximum of seven at Perry Oaks, Middx., on Aug. 15th.

159 Common Sandpiper

As in 1961 there were again no records of breeding in the Area; a pair were however observed courting and mating at Holmethorpe, Surrey, on July 17th (RNFS). There were records for every month of the year except March and November; the winter records come from two localities in January and two in December and, with the exception of a bird at Ham Moor, Surrey, on Jan. 20th, were all in Kent. The maximum numbers for the year at any single locality were 35 at Swanscombe, Kent, from Aug. 11th to 20th.

161 Redshank

There were winter records from ten localities, rather fewer than in 1961. The centre for wintering birds continues to be Kent where there were *c.* 100 at Stone on Dec. 16th; *c.* 250 at Littlebrook on Dec. 15th and *c.* 200 on Jan. 21st; and 70 at Swanscombe Marshes on Jan 6th (FJH). Breeding records are given in full.

- E Fishers Green G.P., Grays chalk pit, and Rainham Marsh, two pairs bred at each site (JCE, AFH, BSMs, CES).
- H Rye Meads, four pairs bred (RMRG).
- M Perry Oaks S.F., one or two pairs bred (RSB, PAD).
- K Littlebrook, two or three pairs bred. Swanscombe Marshes, two broods of young seen in June (FJH).
- S Beddington S.F., one pair attempted to breed (KCO).

162 Spotted Redshank

- E Rainham Marsh, two on Aug. 15th (BK, BJK), and one from Aug. 24th to 28th (PFB, AFH).
- H Rye Meads, one on Aug. 16th (JC). Maple Cross, one on Aug. 19th (BPP).
- M Perry Oaks S.F., one on Apr. 29th and May 5th, and two on May 6th; up to two on Aug. 15th, 20th and 22nd, and one on Sept. 12th (BEC, MJC, PRC *et al.*). Queen Mary Res., one on Sept. 2nd (PJO). Staines Res., five on Aug. 18th, three on 19th, one on 25th (RSB, GCG, DGH).

164 Lesser Yellowlegs

- M One was seen at Perry Oaks S.F., and Staines Res., on Sept. 5th to 7th and again on the 9th (RSB, BEC, JFC, MJCd, PRC, SG, DGH, CAW). This is only the third record for the London Area, the first two being in 1953 (*L.B.R.* 1953: 19).

165 Greenshank

The spring passage records extend from April 26th to June 4th and are given in full below.

- E Girling Res., one on Apr. 30th (JCE). King George V Res., one from Apr. 30th to May 2nd (JCE). Rainham Marsh, one on June 4th (AFH).
- H Rye Meads, one from Apr. 26th to 29th (RMRG).
- M Perry Oaks S.F., two on Apr. 28th and May 5th, and one on May 6th and 12th (GHG, DGH, JRH, CMV). Staines Res., one on May 12th (RES).
- K Sevenoaks, one on May 21st (KOS).
- S Walton-on-Thames, three on May 12th and one on the 15th (GHG).
Autumn records cover the period July 12th to Oct. 7th with a maximum of 10 at Staines Res., on Aug. 20th and Sept. 1st and 8th, and 12 on Aug. 22nd (BEC, PRC). There were four late birds at Colnebrook G.P., Middlesex, on Nov. 18th (EJC, WRI).

169 Knot

- E King George V Res., one on Jan. 7th (BSMs). Nazeing G.P., one on Dec. 27th (BSMs). Rainham Marsh, one from July 29th to 31st, six on Aug. 7th and one on 8th to 9th, one on Sept. 7th (AFH, BK, BJK).
- H Hilfield Park Res., one on Nov. 11th (BLS).
- M Perry Oaks S.F., one on Jan. 20th and 27th; 24 on Sept. 6th, 19 on Sept. 7th to 8th and on the 18th, and at least 12 in the intervening period. Queen Mary Res., one on Mar. 17th to 18th and Nov. 11th. Staines Res., one on Aug. 12th and Sept. 1st, seven on Sept. 9th six on Sept. 10th and one on the 13th (mo).
- K Stone Marshes, one on Dec. 28th (MJC). Swanscombe Marsh, 51 on Mar. 31st and 21 on Apr. 7th, but one only on the 8th. One on Nov. 10th and at least 15 on Dec. 28th (RC, FJH, DJM).

170 Purple Sandpiper

- M Staines Res., one on Oct. 13th and three on Dec. 28th (DCG, DIMW).

171 Little Stint

- E Rainham Marsh, up to four on many dates from July 21st to Aug. 25th (AFH, BK, BJK).
- M Perry Oaks S.F., one on Aug. 1st, and Sept. 22nd to 23rd and 29th (MC, HJF, GCG, DGH, JAJ). Queen Mary Res., one on Aug. 18th (SG), and two on Dec. 15th (RSB).
- K Sevenoaks, one on July 21st (JGH, JMH). Swanscombe Marshes, two on Jan. 6th; one on Apr. 8th, May 12th to 13th and 27th, and on Aug. 22nd and 24th, three on Sept. 22nd, three on Dec. 9th and one on the 16th (mo).

173 Temminck's Stint

- K Sevenoaks, an adult on July 25th (JGH, JMH).

176 Pectoral Sandpiper

- M Perry Oaks S.F., one present from Sept. 8th to 16th, and possibly also on the 7th (mo).

178 Dunlin

Away from the Thames Estuary it was less widespread during the winter than in 1961, there being records from only six localities. The usual high numbers were again recorded at Swanscombe Marshes, Kent, with 1,400 to 1,600 on Jan. 6th to 7th, *c.* 1,000 on Feb. 19th, and *c.* 800 during December.

179 Curlew Sandpiper

- E Rainham Marsh, up to nine from July 27th to 30th and five on 31st, two to nine from Aug. 15th to 24th and one on Sept. 13th (AFH).
 M Perry Oaks S.F., one on Sept. 9th (JFC, PRC, PJO, DIMW) and 12th (DGH, DMP), and one on Oct. 10th and 13th (AJC, DIMW).
 B Barns Elms Res., one on Aug. 29th (KVE).

181 Sanderling

- E Rainham Marsh, three on May 22nd and one on the 29th (AFH).
 M King George VI Res., one on May 26th (LAB). Perry Oaks S.F., six on May 8th, three on May 19th and one on the 20th; two on Sept. 12th, and one on Dec. 15th to 16th (BB, RSB, BEC, *et al.*).
 K Swanscombe Marsh, two on May 26th (CAT).
 S Queen Elizabeth II Res., two on May 12th (MC).

184 Ruff

The usual wintering flock was present in the Perry Oaks, Middx., area, there were ten on Jan. 16th, 26 on Feb. 11th, 24 on Mar. 31st, and 25 on Nov. 25th, the maximum for the end of the year. The other winter records comprise, for Kent, one at Elmers End S.F., on Jan. 3rd (AJG); Sevenoaks, one on Dec. 6th (JGH, JMH); Stone Marshes, eight on Dec. 16th (BEC, JFC); Swanscombe Marshes, four on Jan. 6th and two on Jan. 28th, eight on Feb. 17th and two on Dec. 2nd (BEC, JFC, WAG, FJH); for Surrey, Beddington S.F., one on Jan. 1st and five on Jan. 3rd (RSB, KCO); Holmethorpe, one on Dec. 30th (RLR).
 Autumn passage was recorded from nine localities from July 12th to Oct. 31st with a maximum of 32 at Rainham Marsh, Essex, on Aug. 19th (BK).

198 Greater Black-backed Gull

- S Immature birds were found dead at Queen Elizabeth II Res., on Feb. 7th, 8th and 10th, all three had been ringed as downy chicks as follows:—
 (i) June 21st, 1961, on the Great Ainov Islands, Barents Sea, near the Russian/Norwegian frontier.

- (ii) August 12th, 1961, on Kharlov Island, Murmansk Coast, U.S.S.R.
- (iii) as (i) above.

Records for the Lesser Black-backed, Herring, Common and Black-headed Gulls are being held over until next year in view of the abnormal weather conditions during the winter of 1962-1963, which had considerable effect on the numbers roosting.

202 Glaucous Gull

- E Girling Res., a first-winter bird on Jan. 27th, and two (also first-winter) on Feb. 27th (JCE).
- M Staines Res., an immature on Dec. 25th (LAB).

203 Iceland Gull

- M Brent Res., one on Mar. 17th to 18th and Apr. 16th to 18th (LAB, DT).
- S Barn Elms Res., a second-winter bird on Mar. 31st (LR, LR_s).

202/203 Glaucous/Iceland Gull

- M Brent Res., an immature on Feb. 25th (DT).

207 Little Gull

- H Hilfield Park Res., one on Nov. 4th (EHW).
- M Ashford G.P., an immature on June 30th (BEC, AQ). Staines Res., an immature bird on Sept. 7th (NHP), two on Sept. 9th (TK, BPP), two from Sept. 14th to 23rd, one on Sept. 29th, and two on Oct. 3rd (RSB, BEC, JFC, PRC, HJF, DGH *et al*).
- K Sevenoaks, an adult on Aug. 16th (JGH, JMH).
- S Barn Elms Res., an immature on May 12th (PJS).

208 Black-headed Gull

Five pairs, of which at least four had nests, were present at Maple Cross, Herts. (JDM). The colony at Perry Oaks S.F., Middx., dropped drastically to about 40 breeding pairs (PRC). One found dead at Staines Res., Middx., on Feb. 24th, had been ringed as a young bird at Grotlingbo, Gotland, Sweden, on June 9th, 1961 (BEC).

212 Black Tern

The spring passage this year was poor and produced nothing like the large numbers recorded in 1961. It was early May before the first birds appeared—one at King George V Res., Essex, on May 2nd to 3rd; on the 3rd there were also four at Barn Elms Res., and Walton Res., and two on the Thames at Weybridge, Surrey; a single bird was at Rye Meads, Herts, on May 4th, and on the 5th there were eight at Staines Res., Middx. There were a few further

records up to June 12th with a maximum of seven at Staines on June 3rd. In direct contrast to 1961 the autumn passage, which extended from July 10th to Oct. 6th, produced high numbers. The peak of the movement was in August with 43 passing east over Sevenoaks, Kent, on the 20th; *c.* 80 at Queen Mary Res., on the 21st, and *c.* 80 at Staines Res., Middx., on the 25th.

217 Common Tern

During the breeding season birds were present in the Lea valley, Herts., and at South Weald and Ockenden, Essex. In no instance was any definite evidence of nesting obtained, but a careful watch should be kept in the future.

217/218 Common/Arctic Tern

There was a single bird at Hilfield Park Res., Herts., on Mar. 25th, but the real spring passage commenced in mid-April and continued until June 30th; the peak movements were in late April when 25 were recorded at Staines Res., Middx., on the 27th to 28th. The first autumn birds were seen on July 8th and passage continued until late October, but one was present at Walthamstow Res., Essex, on Nov. 8th. The main autumn movements were in late August and early September, with a maximum of 15 at Queen Mary Res., Middx., on Aug. 21st.

222 Little Tern

- E Harold Wood, three on July 3rd (RGHC).
- M Brent Res., one on May 4th (LAB), and three on June 17th (DT, AGV).
- S Barn Elms Res., one on Aug. 26th (PJS). Queen Elizabeth II Res., an immature found dead on Sept. 16th (EJC, WRI). River Thames, off Bishops Park, one flying south on Sept. 26th (PJS). Walton Res., an immature that had been dead for a considerable time was found on Jan. 23rd (WRI).

223 Sandwich Tern

- E Rainham Marsh, two on Aug. 9th (BK, BJK).
- M Staines Res., three on Sept. 6th (DGH).

232 Stock Dove

The single breeding record received, at Ilford (RWP), certainly does not reflect the breeding success of this species since it was reported from four counties in the Area during the breeding season. However, several observers commented on its absence or scarcity. **Records of all Stock Doves particularly during the breeding season would be especially welcome for 1963.**

Inner London: Hyde Park, one on Mar. 14th. Regent's Park, one on Apr. 25th (EHW).

234 Wood Pigeon

Two young were reared in a nest on the open top of a drainpipe at roof level at Birkbeck College (EHW). Two observers commented that numbers appeared slightly lower in two Inner London Parks.

235 Turtle Dove

Very few breeding records were received due, perhaps, to observers omitting to report on a comparatively familiar bird. Reports indicate that it was recorded from all parts of the Area, including three times in Regent's Park, and particularly from Surrey and Kent. Breeding records were received from Bentley Priory, (where it was reported as scarce), Mill Hill East, Middx., and Walton-on-Thames, Surrey. Absent during the breeding season from Hayes, Kent.

All records for 1963 would be welcome.

236 Collared Dove

An increase in the number of records indicates the spread of this species in the London Area.

- E Buckhurst Hill, one arrived in April and remained until the end of the year (CIF). Ilford, from one to six were present from May to December (RWP).
- H Rye Meads, one on Mar. 24th and one on June 3rd (LL-E, BSN).
- M DGH reports: A pair was first seen in a S. W. Middlesex churchyard on June 12th but enquiries revealed that they had been present from January and some people thought they were there in 1961. In July two pairs were seen on one occasion but usually there were two males and only one female. One pair was always seen near an ivy-covered fir, and on July 22nd a skeleton of an adult at least a year old and a fresh egg were found below the tree. Gales occurring at the time could have blown the egg out of a nest. The three birds remained in the vicinity and on Nov. 4th a full grown juvenile was seen. It could fly well and the adults paid little attention to it.
- S Carshalton, 12 to 15 birds present in January and February with one or two up to June (BEC, AQ, MJC, KDE *et. al.*).
- K Sevenoaks, one on Apr. 28th (JGH, JMH).

237 Cuckoo

Though recorded from a number of localities in Kent and Surrey no reports were received for Herts. and Essex and **the suspected decline in numbers** (*cf L.B.R. 1961*) **can best be established if observers would send in reports of the status of this species comparing 1963 with previous years.**

- S Addlestone, one juvenile (GHG).
- K Elmers End and Sevenoaks, single juveniles (KOS, TK). Inner London; three records for the year.

Owl sp.

While the evidence that owls are affected by toxic chemicals is confined to a single instance relating to a Tawny Owl, circumstantial evidence suggests that they are, nevertheless, fewer in number and all observations would therefore be of great interest in building up a true picture of their present status.

241 Barn Owl

Breeding season records were received from only seven localities with breeding proved at Osterley Park, Middx. (DGH, DMP). At Ham House, Surrey, a pair were present throughout the year and pellet analysis showed that they had fed mainly on Field Voles (*Microtus agrestis*) (BW, GB).

246 Little Owl

The only records received were from Middlesex and Surrey.

- M Perivale, one present during the breeding season (PMS).
- S Addlestone, a pair with 3 young on the wing on July 1st (GHG).

247 Tawny Owl

The few records probably reflect neglect by observers.

- M Resident in Hampstead area though rather scarce in the northern part of the county (EHW).
Inner London: Reported in Bloomsbury, Kensington Gardens and Regent's Park with successful breeding in Holland Park (EPB, RBr).
- K Elmers End S.F., and Grove Park, resident (PM, EMH).
- S Weybridge area, reported to be *increasing* (GHG).

248 Long-eared Owl

All records are given.

- H Elstree, one found dead on road, Aug. 30th (EHW).
- S Weybridge, one in snow laden oak tree being mobbed by five crows, Jan. 3rd (GHG).

249 Short-eared Owl

All records are given.

- E Rainham Marsh, one on Jan. 25th (KB). Walthamstow Marshes, one on Nov. 21st (JAS).
- H Rye Meads, one on Jan. 21st (CW, RB) and one on Oct. 27th (TWG, BSN).
- M Ruislip, one on Nov. 11th (BPP).
- S Bookham Common, one on Sept. 16th (PJO). Farleigh, one on Dec. 21st (LWC). North Downs, one being mobbed by rooks (HEP).

252 Nightjar

The following distribution in the breeding season is almost certainly incomplete. In particular, no records have been received for the

woodlands west of Broxbourne in Herts., in which at least 11 pairs bred in 1961.

- E Thorndon Park, one on May 30th and three on June 26th (RRV).
- M Mill Hill, one on June 18th (EHW).
- K Bexley, three or four pairs at Joyden's Wood, May to July, but no evidence of breeding obtained (JCI, FJH, KHP).
- S Esher Common, up to three present from May to July (EJC, BEC, SG, WRI, PJO). Farleigh, a male from May 28th to Aug. 20th (LWC). Headley Heath, two pairs in June and July (IBM). Holt Wood, one pair probably bred (RGB, AJG). Limpsfield Chart, two or three pairs present from June to the second week of August (AJH, SDT). Oxshott, one churring at Princes Converts on June 6th, and a pair seen on June 27th (SG, DP). Banstead and Walton Heaths, *c.* four pairs in June and July (IBM, JABm). Warlingham, a pair present on May 31st stayed well into June (RNFS). Weybridge, a male flushed by a dog at Brooklands Technical College on June 24th (GHG).

255 Swift

Several observers commented on unusually large numbers on spring passage, but, as usual, records are largely confined to week-ends. GHG reported 3,000 per hour moving N. of Staines Res., Middx., on Apr. 28th but did not give the duration of his observations. PAD and RSB estimated 3,000 there on May 5th when there were 1,000 + at King George V Res., Essex (BSMs, JF, FR). The following day, May 6th, PJO gave 5,000+ as a conservative estimate of the numbers at Staines Res., and GHG noted a passage S.W. at a rate of 1,200 per hour from 0900 hours to 11.30 hours at Hersham S.F., Surrey. The maximum count the following week-end was 1,700 at Staines Res. on May 13th (MC).

No comparable numbers were noted on the autumn passage, the maximum being 1,350 at Rye Meads, Herts., on Aug. 12th (RMRG). No large numbers were seen after Aug. 20th.

There were two recoveries during the year of birds ringed at West Ewell, Surrey, in 1957: the first, retrapped at Ockenden, Essex, on May 5th had been ringed on July 21st, 1957, the second, caught at Bedfont, Middx., on May 6th had been ringed on July 7th, 1957.

259 Kingfisher

Bred at Bushy Park, Middx. (WRI), and in Surrey by the River Wey at Addlestone, and on the Byfleet/Weybridge boundary (GHG). One was seen several times during the breeding season by the River Mole at Hersham, where a pair bred in 1961 (WRI).

Recorded in autumn and winter from many suitable localities throughout the area with the exception of Bucks. and Essex.

Inner London: Regent's Park one on Dec. 10th (EHW).

262 Green Woodpecker

- M Inner London: a young bird in Regent's Park on Aug. 10th (EHW).

263 Great Spotted Woodpecker

- M Inner London: Holland Park, present throughout the year; juveniles seen on July 6th and 11th and one found dead on July 7th (RB, EPB).

264 Lesser Spotted Woodpecker

Reported from some 35 localities, over half of which were in Surrey. Proof of breeding was obtained only at Brent Park, Middx. (EHW), and in Surrey at Arbrook Common (WRI), Richmond Park, two pairs (EDB), and Shirley Hills and Shirley Golf Course (AJG).

In Inner London one was seen in Hyde Park on Jan. 5th and 10th (RFS), in Holland Park, one on Feb. 11th and a pair from Apr. 24th and one on three dates in October (EPB), and in Regent's Park, one on Dec. 30th (DIMW).

265 Wryneck

All records are given. No additional information has been received on the status of this species in Kent.

- H Rye Meads, one on May 17th (LL-E).
 K Horns Cross, near Dartford, one on June 8th (JCI). Northfleet, one pair probably bred (MJC). Stone, one on Apr. 28th (AW). Swanscombe, one on Apr. 21st (MJC).
 S Ashstead, one calling on Aug. 30th (MJC). Old Coulsdon, one heard near Farthing Down on one occasion in June; Sanderstead, one feeding on ants in the observer's garden on Sept. 2nd and 3rd; Woldingham, one heard many times in June (AJH).

271 Woodlark

The decline of this species in our area continues.

All records are given. The winter records for Inner London following hard weather at the beginning of the year are noteworthy.

- E Epping Forest, one or two in March and April (JCE, BSMs).
 M Brent Res., one on June 14th (EHW), 12 on Dec. 28th (LAB).
 Inner London: Hyde Park, one on the football pitches on Jan. 15th (RFS); Regent's Park, two on Feb. 1st flew N.W. (RCG).
 S Ham Moor G.P., two flying S. independently on Jan. 14th (GHG). Mickleham, one or two at Juniper Top and White Downs in June and July (GMC, AJH, RHGY). Ockham Common, a pair on June 2nd (SG). Richmond Park, c. four pairs bred (CES). Shirley, single birds on May 6th and July 7th (AJC, RGB). Tooting Bec Common, one on Mar. 6th (JG). Weybridge, a pair on Mar. 13th, five on Sept. 26th (GHG). Wimbledon Common, one pair bred (LR, LRs).
 Inner London: Archbishop's Palace, Lambeth, three on Jan. 8th flew off to W., one flew W. on Jan. 9th, and one N.W. on Jan. 10th (GHG).

272 Skylark

The very heavy movement to the S. and S.W. which commenced at the end of December 1961 (see *L.B.R.* 26: 41) continued on January 1st on a similar scale, but only small numbers were moving on the following day. During the next week, with milder conditions prevailing, there were reports every day of small parties moving N. to W. and exceptionally of 400 flying S. on Jan. 7th (LAB).

With the onset of cold weather in the last week of December, movements varying from N.W. to S. were noted daily from Dec. 28th to 31st. They were not as spectacular as in the previous year, but on the 28th, 700 flew S.W. in one hour at Molesey Res., Surrey (WRI), and 600 S. at Brent Res., Middx. (LAB).

274 Swallow

GHG reported an early passage S.W. of 600 to 800 per hour at Hersham S.F., Surrey, on July 21st, but did not give the duration of his observations (see also under House Martin).

275 House Martin

On July 21st there was a heavy passage S.W. at Hersham S.F. estimated by GHG at 1,500 per hour, of which 90% were juveniles (duration not given). Heavy rain which fell that day may have influenced this movement, as AJG noted 400 per hour moving south after rain at Shirley, Surrey, on Aug. 7th.

278 Golden Oriole

H Broxbourne, a male seen and heard singing at Broad Riding Wood on June 7th (JJW).

279 Raven

M Brent Res., one flying N. on Aug. 19th (LAB, AGV). Details noted included a wedge-shaped tail, and larger size and slower wingbeats than a Carrion Crow present for comparison. But the possibility of an escape cannot be excluded.

281 Hooded Crow

H Cuffley, two on Oct. 28th, one on Oct. 29th, and 30th and Dec. 1st (JJ, TJ, JL). Rye Meads, one on Oct. 21st and 27th (PFB, TWG, BSN).

S Beddington, one on several dates from Nov. 18th to Dec. 24th (RSB, AJH, KCO). Chelsham, one on Dec. 22nd (LWC). Herne Hill, one flying N.E. on Mar. 22nd (HEP).

282 Rook

M Inner London: Millbank, eight flew E. over the Thames on Feb. 8th (GHG). Soho Square, two on Nov. 29th flew away to the W. (CJK).

283 Jackdaw

- M Inner London: Kensington Gardens and Hyde Park, up to four noted on a number of dates from January to May 16th, two on Oct. 10th and five or six on Nov. 7th (seven observers). DT reported a pair building at Stanhope Gardens on Mar. 31st, about half a mile from the former breeding area in Kensington Gardens, but no subsequent information is available. One flying over Kennings Way, Kensington, on Mar. 14th (AFM). Regent's Park, up to four on several dates from January to May 25th, four on Oct. 25th (RCG, EHW).

284 Magpie

Although this species is undoubtedly increasing, no further extension of the breeding range in built up areas was reported. Inner London records only are given.

- M Holland Park, one on Mar. 12th (RBr). Westminster, one in Victoria Tower Gardens on Jan. 22nd and Feb. 8th (GHG).
 S Lambeth, one in Archbishop's Park on Sept. 11th (GHG). Southwark one in Geraldine Mary Harmsworth Park on Jan. 30th and May 8th (GHG, PJSn).

286 Jay

Breeding season distribution for Inner London and a record of movement of unusual numbers are given.

- H Broxbourne, 57, in two parties flying S.S.E. on Nov. 16th (BSMs).
 M Inner London: Brompton Cemetery, two on May 8th (GHG). Holland Park, present throughout the year, and juveniles seen (EPB). Hyde Park and Kensington Gardens, at least one pair bred (RFS). Regent's Park, at least three pairs bred (RCG, DIMW).

290 Coal Tit

Breeding season records for Inner London only are given.

- M Holland Park, one pair bred successfully (EPB). Kensington Gardens, one near the Albert Memorial on May 2nd (EHW). Regent's Park, two in the Baptist College Sanctuary on May 14th (RCG).

293 Willow Tit

Breeding season distribution is given.

- E Epping Forest, many reports of up to ten birds, including a pair with two young on June 14th (RTB, RECC, JCE). Hainault Forest, one on Apr. 9th (KN). South Weald, two on Apr. 10th (AFH, APS).
 H Bayford, two in Blackfen Wood on July 8th; Mimms Wood, a pair feeding young on June 13th; Northaw Great Wood, three pairs on June 30th (BLS).
 M Harefield Place, one pair bred (DGH). Ruislip Common/Copse Wood, two pairs (BPP). Scratch Wood, two pairs bred successfully (EHW).

- K Bexley, a pair feeding young in Joyden's Wood on June 3rd (KHP). West Wickham, one pair (DH).
- S Bookham Common, a pair and two others on July 8th (GB). Farleigh, a pair bred unsuccessfully (HEP). Gatton Park, two singing males on Apr. 12th (HB). Headley Heath, a pair feeding four young on the remarkably late date of Aug. 12th (JAF). Sanderstead, single birds on May 25th and 26th, and July 9th (LWC, SDT). Selsdon Wood, a pair feeding young in the nest on May 27th (RSB, RHK). Tadworth, a singing male from late March to early May (HB). Woldingham, one on May 6th (RHK).

294 Long-tailed Tit

Inner London records only are given.

- M Bloomsbury, two on Oct. 5th in Brunswick Square. Green Park, two on Nov. 21st. Regent's Park, several on Jan. 1st, eight on Aug. 28th (EHW).
- S Lambeth, nine flying E. at Archbishop's Park on Jan. 3rd (GHG).

295 Bearded Tit

For the fourth year in succession, this species irrupted into the London Area in late autumn when several were heard (and recorded on tape) at Berwick Pond, Rainham, Essex, on Nov. 29th (MJA).

Of the birds which arrived in 1961, several were heard at Berwick Pond on Jan. 10th, and six seen and others heard there on Jan. 13th (MJA), and up to four remained at Swanscombe, Kent, until Feb. 25th (JMC, KHP *et al.*).

296 Nuthatch

All records for Inner London, including two cases of successful breeding are given.

- M Holland Park, three, possibly four, birds present, and one pair bred successfully (EPB). Kensington Gardens, one on Feb. 22nd and Oct. 10th (EHW); seen feeding young in nest near Speke memorial June 5th to 14th (RFS). Notting Hill, one calling in Ladbroke Square on Mar. 18th (EPB). St. James's Park, one on Mar. 7th (GHG).
- S Lambeth, one in Archbishop's Park on Oct. 16th and 18th (GHG).

298 Tree Creeper

- M Inner London: Kensington Gardens, one on Apr. 13th, 26th and 27th (RFS), and June 5th (CHH, CHFP). Regent's Park, one on Jan. 20th (DIMV).

The above are the only occurrences for Inner London. The five records submitted for the rest of the area clearly give no indication of the status of this tame but unobstrusive species. As requested in *L.B.R.* 26: 45, all records for 1963 will be welcome.

299 Wren

Some breeding season records for Inner London are given.

- M Cripplegate, a nest with feathered young was found in ruined masonry on June 21st (RBW). Hyde Park and Kensington Gardens, seen in every month of the year, and two young were being fed near the Battery on June 21st (RFS). Holland Park, up to six singing males, and young birds were seen (EPB).

301 Mistle Thrush

The first evidence this year of nocturnal movement over the London Area came from JABn, who heard a few calls of this species amongst those of other thrushes, including Fieldfares, apparently moving east over West Norwood, Surrey, at 23.00 hours on Nov. 8th.

302 Fieldfare

A fairly prominent species in the massive hard-weather evacuation to the south on Jan. 1st and thereafter widespread in Inner London for several days. Not as obvious as usual on diurnal migration, with main autumn arrival probably later than in 1961: the largest numbers recorded were *c.* 500 at Rye Meads, Herts., on Nov. 10th (RMRG). The biggest winter flock was of *c.* 350 to *c.* 400 roosting near Cuffley, Herts., on Dec. 15th (BLS).

303 Song Thrush

Regular counts at Clapham Common, Surrey, showed an increase overnight from six to *c.* 50 on Oct. 13th (JG). This constitutes the clearest evidence in recent years of a nocturnal fall into the urban part of the London Area.

304 Redwing

Following the heavy movements to the south on Dec. 31st, 1961, and Jan. 1st, Redwings were frequent in Inner London until early March, with up to 40 in Hyde Park (RFS) and 25 in Holland Park (EPB). None in spring after Apr. 6th, but conspicuous in autumn from Sept. 29th, with many large nocturnal movements in late October, early and late November; on Nov. 8th, a "vast movement" occurred over West Norwood and Norbury, Surrey, between 23.00 and 23.30 hours with "several thousand" birds passing flying "very low, often visible in street lamp light and calling continuously" (JABn).

In December, reports from Surrey indicate a larger than usual winter population, including *c.* 4,000 roosting in hawthorn at Caterham-on-the-Hill on Dec. 19th (AJG) and over 2,000 at Addington from Dec. 20th (DS). Counts of this species, Blackbird and Fieldfare made during the month in *c.* 200 acres of farmland near Addington by RNFS showed an average number of 16 thrushes per acre, with those of Redwing and Fieldfare being over 25 times the normal figures.

307 Ring Ousel

M Inner London: Regent's Park, a cock coming in from S.E. paused momentarily before climbing away to N.N.W. at *c.* 08.00 hours on Apr. 12th (RCG, DIMW, KAW).

S Beddington S.F., single birds on Apr. 29th, May 6th and Oct. 6th (BRS).

Between 1955 and 1962 there have been 34 records of this species (covering 41 individuals) at 19 localities throughout the London Area. During the eight years it has been seen most frequently in Surrey, particularly at Beddington S.F. (eight records). In other counties the only places with more than single records are King George VI Res., Middx. (four), and Regent's Park, Inner London (three). It should be noted that all three places are subject to very regular observations and that the records noted above may well be a better sample of migrant numbers than the random singles elsewhere:

308 Blackbird

A cock ringed at Merstham, Surrey, on Dec. 21st, 1962, was recovered near Le Havre, France, on Jan. 5th, 1963 (RNFS), and had clearly lost little time in trying to escape the severe weather which began on Dec. 26th.

311 Wheatear

A pair frequented some playing fields at Mill Hill, Middx., in May, but the birds disappeared after June 3rd: breeding was not attempted (EHW).

A hen found dead at Norbury, Surrey, on Oct. 1st was unusually injured: both tarsi, though completely healed, had been broken at some time previously (JABn).

317 Stonechat

The welcome reappearance of this species in summer and as a breeding bird in 1961 was repeated in only two counties in the year under review.

K Swanscombe, a cock on June 2nd (DJM).

S Brooklands, one pair, believed to have bred successfully (LH). Headley Heath, one pair bred, rearing two young (IBW). Walton Heath, one pair bred, rearing at least three young (RSB).

318 Whinchat

Little evidence of change in the small breeding population, with at least ten pairs present in summer, but all north of the Thames and four in the Staines area alone. A remarkable fall of 21 birds occurred in Regent's Park, Inner London, on May 3rd (RCG); a spring maximum of three occurred on the same date at Rye Meads, Herts. (RMRG).

320 Redstart

Only 31 breeding pairs were reported, in contrast to no less than 51 in 1961 and 35 in 1960, but there was evidence in the records submitted that observations on the species were fewer than in the previous years. The population in Epping Forest, between Chingford and Loughton, remained level at 16 pairs (RTB), but at Northaw Great Wood there were only six pairs, "the lowest breeding population ever known" (BLS), and the cock bird which returned to Hampstead Heath on Apr. 24th was still unmated on June 6th (EHW).

The problem of forming a continuous index of population for chats (and other scarce breeding species) would be simplified if known breeding areas were surveyed regularly and all counts submitted.

321 Black Redstart

All records are given.

M/S Inner London: with continued demolition in and restricted access to the remaining bombed sites, the population of the species in the City is now very difficult to assess. One immature bird wintered at Cripplegate, being seen quite frequently from Jan. 16th to Feb. 21st, and was probably the same bird as that recorded on Nov. 14th, 1961 (RBW); this is the first record of wintering in the City since 1950/51. No others were seen in the Cripplegate area before Apr. 11th, but by June at least four cock birds were singing: of these, two found mates and broods were being fed at Cripplegate (St. Giles') on July 8th, and at Moorgate (Tenter Street) on July 26th. The number of young fledging successfully is not known accurately, but was certainly less than in 1961 (PHFB *et al.*). Outlying cocks were seen in Bloomsbury (Senate House) on Mar. 22nd and Apr. 27th (EHW) and at the Surrey County Hall between May 21st and June 5th (GT). The only other record for Inner London was of an immature bird at Lambeth Palace on Sept. 7th (GHG).

K Elmers End S.F., a cock in song on June 4th (PM).

S Beddington S.F. and Croydon Power Station, one pair present from Apr. 21st to July 22nd, building a nest on the cooling towers, but no young seen; one on Sept. 29th (RSB, KCO, BRS). Holmethorpe, a hen on Apr. 17th (RLR, DW); Limpsfield, a hen (in a quarry) on Apr. 22nd (LWC).

322 Nightingale

In Surrey there were records at nine localities in May and June, with at least twenty cocks heard in song at some time during the two months. Elsewhere, apart from the known success of a pair at Scratch Wood, Middx., there were few records, and only 20 cock birds were found in the areas of Epping Forest visited annually by regular observers (cf. *L.B.R.* 26:50).

325 Robin

Analysis of the summer records for Inner London indicates that in the year under review at least 80 adults were present in seven parks and squares, with the biggest concentration in Holland Park, where it is increasing (EPB).

327 Grasshopper Warbler

As in 1961, about 30 individuals were seen, and all records were restricted to Essex, Kent and Surrey; 21 of these were cock birds in song in suitable habitat outside the normal period of spring arrival, but there was no evidence of breeding success at any locality other than the trapping of two juveniles in Surrey on July 24th.

[334 Marsh Warbler

H Rye Meads S.F., at least four pairs of birds were present, breeding in overgrown ditches and long grass, and "whose habits and songs (were) different from those of normal Reed Warblers" (RMRG 2nd Annual Report, 1962:15). They still present a very intriguing problem.]

343 Blackcap

The tiny breeding population of Holland Park, Inner London, which produced young in 1960 and 1961, did not reappear in the year under review. A single cock sang throughout the summer, but a hen on July 5th was probably a wanderer (EPB).

348 Lesser Whitethroat

Unusually obvious on spring passage: only three records between Apr. 19th and 22nd, but then a remarkable influx from Apr. 24th to mid-May, when birds were seen throughout the London Area. There were even three in Inner London, where the species is usually only an autumn migrant. Following these occurrences, in Essex and Surrey no less than fifteen *pairs* and three singing cock birds were present during the summer. For the first time since 1958 the species bred in Epping Forest, four pairs being present. In the other counties there was no evidence of breeding, nor of any increase in the number of singing males.

356 Chiffchaff

Records later than normal autumn passage period are given:

- H Hilfield Park Res., one of a party of leaf warblers identified as this species on Nov. 4th (EHW).
 - M Inner London: Cripplegate, one, probably this species, on Nov. 9th (RBW).
 - K Joyden's Wood, one on Oct. 27th and Nov. 3rd (JCI, RWC).
- The above may refer to an exceptionally late departure movement

rather than to true wintering. The only other records were of one or two birds at Elmers End S.F., Kent, from Dec. 1st to 9th (JCI, AJG, LK, PM) and one at Godstone, Surrey, on Nov. 24th (AJH).

357 Wood Warbler

Breeding season records outside normal passage periods are given in detail.

- E Epping Forest, at High Beech, one cock in song on May 20th, 25th and 28th, two in song on June 3rd and 5th, a hen also on the latter date (seven observers), and at Sewardstonebury a cock in song between May 4th and June 27th (RTB). Warley, a cock in song on May 28th (AFH).
- H Northaw Great Wood, two cocks in song in May and June; one pair bred (TJ, EHW).
- M Harrow Weald, one pair bred (EHW); Stanmore Common, one pair nested but were unsuccessful (EHW).
- S Addington, a cock in song on July 15th (RNFS); Esher Common, a cock in song on May 27th (PJO); Farley, one on July 21st (SDT); Littleworth Common, one pair with a nest with five eggs on June 2nd, but their outcome was considered doubtful (EJC, WRI).
- K Chislehurst Common, one on July 21st (JCI).

Summarizing the above records, it appears that 13 or 14 cock Wood Warblers were singing in suitable habitat at some time during the breeding season, eight making extended stays and five attracting mates: four pairs definitely bred, at least two successfully. The population thus appears remarkably stable in total number at least over the years since the apparent decline in 1956.

Records of passage birds total a further seven birds in spring and five in autumn; exactly half the total number were seen in Regent's Park.

364 Goldcrest

During the hard weather early in the year, two visited a bird table at Stanmore, Middx. (per EHW).

368 Pied Flycatcher

Migrant records consisted of about 55 birds, three in spring and the others in autumn. In the latter season passage was noted throughout the area from July 31st to Oct. 10th. The occurrence of a dozen birds around the third week of August probably reflects the departure of British breeding stock, but the records of 36 individuals in September reflect the pattern of continental immigration noted in *L.B.R.* 26: 53.

The variation in the numbers and fall localities of nocturnal migrants is admirably illustrated by this species. Regular observations at Rye Meads, Herts., and Regent's Park, Inner London, produced autumn totals of two and 22 birds respectively!

371 Hedge Sparrow

Records made by GHG in the Lambeth Palace Gardens, Inner London, are of considerable interest. The number present in January and October fluctuated in a way which suggests considerable local movement or migration:—

<u>Jan.</u>	3	8	12	23	25	<u>Oct.</u>	2	5	8	9	10	11	12	15	22	23	24
<i>Birds</i>	2	2	3	8	2	<i>Birds</i>	2	8	—	15	2	4	2	5	3	4	2

A pair at Weybridge, Surrey, took over the old nest of a Song Thrush, and lined it with hair before laying (GHG).

373 Meadow Pipit

The peak of spring passage occurred on Mar. 31st and Apr. 1st; the passage rate of birds per hour up the Lea valley and over Regent's Park, Inner London, and Swanscombe, Kent, varied little, being between 30 and 50 on both days (JMC, RMRG, DIMW).

376 Tree Pipit

The strength of the breeding population of Surrey can be illustrated by the following numbers: 12 pairs at Holt Wood, Farleigh (RGB, DS); six pairs on Ganger's Hill, Godstone (DS), and 18 pairs around Addington and Warlingham (RNFS). In the first two places, DS thought the numbers to be much higher than usual.

379 Rock and Water Pipit

That even this normally coastal species can be affected by hard weather is shown by the sighting of one flying S.S.W. over Finsbury Park, Middx., on Jan. 1st (DIMW). The bird was seen at close range, and was taking part in a large movement.

Records of races other than *petrosus* are given.

H Rye Meads, one with the characters of *littoralis* on Mar. 18th (TWG, NR). West Hyde G.P., one with the characters of *spinoletta* on Dec. 31st (IGJ).

M Brent Res., one with the characters of *spinoletta* on May 7th (LAB).

381 Grey Wagtail

No real evidence of a change in the strength of the breeding population, but the number of pairs found in Surrey was only six (ten in 1960). One bird summered on the Thames at Hammersmith.

382 Yellow Wagtail

All records of birds with the characters of races other than *flavissima* (Yellow) are given.

H Rye Meads, a cock *flava* (Blue-headed) on Apr. 20th (RMRG).

M Spout Wood, one resembling *flava*, calling anxiously from a cornfield, on July 15th (DGH).

- S Records of at least seven birds: Barn Elms Res., two, one a cock *flava* and the other a variant recalling *thumbergi* (Grey-headed), on Apr. 19th; the cock *flava* again on the 20th, and another cock *flava* with a hen in close association on the 23rd (mo). Beddington S.F., single birds, both *flava*, on Apr. 19th and Sept. 23rd (BRS). Hersham S.F., a cock *flava* on Apr. 14th and May 12th (GHG).

383 Waxwing

- E Brentwood, two on Apr. 4th (per DH). Buckhurst Hill, one in the first week of February (DHT, per KN). Woodford Wells, three on Feb. 15th (JAB).
- S Weybridge, one on Mar. 28th (GHG); Wimbledon, six on Mar. 23rd (BBH).

384 Great Grey Shrike

- S Banstead, one at Park Down on Feb. 17th (RCR). Leatherhead, one on Apr. 1st (TLB). Wimbledon Common, one on Oct. 20th (PJC).

388 Red-backed Shrike

All records are given.

- E Brentwood, one pair bred (HM, RBW). Epping Forest, two pairs bred (BSMs, FR). Havering, one pair bred (JEF). Thornwood Common, a migrant cock on Sept. 2nd (DIMW).
- M Mill Hill, a hen or immature on Aug. 13th (EHW). Ruislip, a hen on May 20th (EHW).
- K Foots Cray, a cock by the R. Cray on June 5th (KHP). Ruxley G.P., one pair, present between May 22nd and Aug. 31st, bred and reared at least one young (JCI, RWC, FJH, AW). Stone, records for this area difficult to interpret but at least one pair bred (the hen seen carrying food on July 14th) and at least one other cock was present (JCI, RWC, PJO, PMW).
- S Addington, one pair bred probably rearing at least two young; an immature trapped on Aug. 16th (RGB, AJG, AS, RNFS). Ashstead Common, a pair from May 10th to 16th, followed by records of immature bird(s) in early August, but definite breeding not established (MJC, BH, FJH). Near Banstead, a pair on June 14th (IBW). Brooklands, one pair bred, the cock seen feeding one young on July 15th (LH). Caterham Valley, one pair bred, success not established (JABn). Chipstead, one heard on July 20th (RGB). Coulsdon, two pairs bred, one rearing three young (RGB, AJG, RLR). Dulwich Common, a late migrant on Sept. 29th (TRS). Epsom Common, one pair nested, success not established (MJC). Epsom Downs, one pair attempted to breed, but eggs taken (AJH). Farthing Down, at least one pair present, success not established (AJH). Fetcham Downs, a cock on May 29th (MLC). Headley Heath, one pair from June 12th to 18th (GMC, RHDY). Leatherhead, at least four and probably five pairs bred, no details of success available (GMC, MLC, TLB). Old Coulsdon, a cock from June 8th to 14th (RGB, AJG, RLR, SDT). Rich-

mond Park, a migrant cock on May 6th (DCG). Shirley, an immature on July 18th (AJG). Tadworth, one pair bred successfully for the *second* year running (HB). Thames Ditton Common, a hen on June 17th (PJO). Walton, one pair with three young capable of flight, on July 15th (GHG). Woldingham, a cock in June (AJH).

389 Starling

Some details of non-urban roosts are given.

- E Crabb's Green, "a few thousand" in a small thorn wood on Sept. 2nd (DIMW).
- H Cuffley, large numbers in December, with *c.* 10,000 on the 15th, *c.* 19,000 on the 19th and *c.* 25,000 on the 21st (JAH, TJ, BLS, AT). Ruxley G.P., *c.* 1,000 on July 29th (FJH).
- K Westerham, on Feb. 25th, "uncountable numbers, estimated at hundreds of thousands, streamed in from N. and N.W." to Squerryes Park (EMH).
- S Richmond Park, over 500 in reed-bed of Upper Pen Pond on Oct. 28th (BLH, VFH).

Starlings took a prominent part in the cold weather movements in early January.

391 Hawfinch

Breeding season records only are given; evidence of breeding is sadly lacking.

- E Brentwood, a pair on Apr. 22nd (HM). Chigwell, one to four from Apr. 2nd to 17th (KN). Epping Forest, two on Apr. 1st, one on Apr. 15th, one July 29th (RTB, JCE).
- M Golders Hill, one on Apr. 30th (EHW). Ruislip, one on June 2nd, 3rd and 16th (BPP). Inner London: Regent's Park, a young bird on June 18th and July 19th (RCG).
- S Farleigh, three on June 17th (LWC). Farthing Down, one or two throughout the spring and summer (AJH). Leatherhead, a family party seen on July 22nd (TB). Weybridge Technical College, two May 10th and one on July 1st (GHG).

392 Greenfinch

In Inner London, at least one pair bred at Holland Park (EPB), Hyde Park (RFS), St. James's Park (GHG) and six pairs in Regent's Park (EHW, DIMW, RCG).

393 Goldfinch

Flocks after the breeding season were smaller than in 1961, only reaching three figures at Rye Meads, maximum 200 in August (RMRG), and Hersham S.F., maximum 150 on Oct. 20th (GHG).

Inner London: Holland Park, a pair was present in the breeding season and nesting material was being collected on May 12th (EPB).

394 Siskin

Widespread in small numbers at both ends of the year, the maxima being 43 at Broadwater, Surrey, on Jan. 27th (GHG), and 40+ at Wanstead Park Essex, on Oct. 13th, the first flock reported in the autumn (MPT).

Inner London: Bloomsbury, four in Tavistock Square on Mar. 7th and 8th, several in Gordon Square on Mar. 9th, and one in Bloomsbury Square on Mar. 13th (EHW). Regent's Park, one spring record, four autumn records and 10 on Dec. 29th (DIMW).

395 Linnet

Small numbers were noted in the great hard weather movement on Jan. 1st, 24 flying S. at Shirley, Surrey, (RGB) and 44 S.S.W. at Finsbury Park (DIMW). At the latter a further 10 flew S.S.W. on Jan. 2nd (DIMW).

One ringed at Poyle G.P., Middx., on Aug. 1st, 1961 was recovered at Lisieux, France, on Jan. 19th, 1962 (DGH).

The largest flocks noted in Inner London were 29 in Lambeth Palace Gardens, Surrey, on Mar. 9th (GHG), and 30+ at Cripplegate on Dec. 31st (RBW) during the severe weather movement at the end of the year.

396 Twite

H Rye Meads, one on Nov. 25th (RMRG).

K Swanscombe, one on Feb. 11th (KHP).

397 Redpoll

Birds considered by the observers to show characters of the race *flammea* were reported from Epping Forest, Essex, two in mid-February (JF), and one on Dec. 21st (JCE); Elmers End S.F., Kent, one Mar. 18th to 20th (LK, PM, RNFS); Shirley Hills, Surrey, two on Feb. 11th (RGB, AJG); Headley Heath, at least two on Nov. 25th (MJC). Breeding season and Inner London records are given below.

H Northaw Great Wood, two pairs on July 2nd (RB, CW).

M Hampstead, a pair at Kenwood on Apr. 24th; Ruislip, one pair bred; Stanmore, one pair bred on the common and another at Lower Bentley Farm (EHW). Inner London: Regent's Park, three spring and four autumn records (DIMW), two flying north on Apr. 14th (RCG), and one on Nov. 8th (EHW).

K Chislehurst, two pairs probably bred in gardens bordering Leeson's Hill; Bexley, a pair at Joyden's Wood on June 3rd; Pett's Wood, seven pairs present throughout the breeding season (KHP).

S Burgh Heath, a male present throughout the summer (RHBF). Headley Heath, a pair in June (HB). Oxshott Heath, two or three pairs in May and June (SG, PJO). Walton Heath, three males and two females on June 10th (RSB).

401 Bullfinch

In the *L.B.R.* for 1961 attention was drawn to an irruptive movement which took place in the autumn of that year. Although only one bird was seen taking part in the hard weather movement on Jan. 1st, records for the following days indicate that a further influx took place. All Inner London records and three cases of unusual numbers are given.

- H Rye Meads, 50 on Jan. 7th, 55 on Jan. 14th, falling to 40 on the 21st and 30 on Feb. 4th (RMRG).
- M Brent Res., six on Jan. 1st, 30 on the 2nd, 40 on the 3rd, but only two on Jan. 21st (normal population 2 or 3) (LAB). Inner London: Belgravia, one in a garden at Graham Terrace on Jan. 2nd (LGN). Holland Park, six on Jan. 5th, up to three until the beginning of March, the last seen on Mar. 28th (EPB). Hyde Park, one on Mar. 5th (RFS). Kensington Gardens, one on Jan. 2nd and 3rd, two or three on the 4th (RWH, RFS). Regent's Park, two pairs bred each rearing two young (DIMW).
- S Epsom S.F., 15 to 20 on Jan. 7th (MJC).

404 Crossbill

The irruption of this species into the London Area was probably the largest since 1935/36. North of the Thames and in Kent the appearances were sporadic, no party remaining more than a few days, and records are given in full under the respective counties. In Surrey flocks remained in favoured localities over longer periods and the volume of records is much greater; in fact, some observers only provided first and last dates and maximum numbers. Consequently it is difficult to assess the total numbers which were present in the Area at any time, but they probably did not exceed 200. Only a summary can be given of the Surrey records.

- E East Ham, one at bird-table feeding on bird seed on Oct. 21st (Mrs. B. Parker per B.T.O.). Havering, present from July 14th to 22nd, maximum 27 on July 21st (JEF).
- H Elstree, one on Sept. 14th (EHW). Haileybury, *c.* 12 at Goldings Wood from Sept. 25th to Oct. 5th (DDL). Rickmansworth, four at Moor Park on Aug. 18th (I. R. Sistby per B.T.O.).
- M Hampstead Heath, one on Sept. 12th (JG). Mill Hill, two on July 19th and four on Oct. 28th (EHW). Osterley Park, three flying N. on Aug. 2nd (DMP). Inner London: Regent's Park, 20 to 25 flew W.S.W. on June 30th, three on Aug. 5th, one on 6th and five on 10th (RCG, DIMW).
- B Iver, up to ten on Nov. 9th at Black Park (DGH).
- K Farnborough, two on Dec. 8th (PMW). Orpington, three on Aug. 6th (Mrs. L. M. Sudell per B.T.O.).
- S There was an isolated record on June 7th of a pair with three juveniles at Esher Common; the hen was seen to feed one of the juveniles (sg). Three were seen at Walton Heath on July 3rd (MJCd), and one

flying W. at Esher on July 8th (DP). From July 10th onwards the movement was clearly widespread. At Merstham, on July 16th, 35 to 40 were seen flying S.W. (RLR). At Kingswood three juveniles visited a pool on July 18th and then there was a big build-up to over 100 in late July and early August (R. Campbell per B.T.O.), when numbers for the Area as a whole probably reached a peak. On Aug. 5th RHB and JAF counted 57 birds leaving a larch wood between 1900 hours and 2030 hours at Nork, Banstead, 1½ miles N.W. of Kingswood. By the end of August birds had been reported from Addington, Addiscombe, Banstead, Coulsdon, Esher, Farleigh, Godstone, Headley Heath, Kenley, Holmethorpe, Merstham, Oxshott, Sanderstead, Shirley, Tadworth, Tattenham Corner, Walton Heath, Weybridge, Whyteleafe, Woldingham; in the heavily built-up district of Balham a westerly passage of from one to four birds at a time was noted on July 11th, 20th, 21st, 28th and 29th (PRC). By mid-September many birds had left the Area and the last large flocks were 30 on Sept. 23rd (RSB, PAD) and 20 on Oct. 7th at Nork (JAF *et al.*). After Nov. 18th the only records were of two at Nork on Dec. 2nd (JAF *et al.*) and of one flying N. at Addington on Dec. 21st (DS).

407 Chaffinch

During the hard weather movement at the beginning of the year DIMW noted 17 on Jan. 1st and five on Jan. 2nd flying S.S.W. at Finsbury Park, and PJSn 13 flying S. at Westminster on Jan. 1st.

Breeding season records for Inner London are given below.

- M Holland Park, about four pairs, and juveniles seen (EPB). Hyde Park, one young bird being fed on June 15th (RFS). Regent's Park, at least seven pairs bred (DIMW, EHW).

408 Brambling

Scarce North of the Thames. Commoner in Kent and Surrey but only two flocks exceeded 50 birds.

409 Yellowhammer

Records for Inner London and of a large flock in Herts. are given, all perhaps influenced by the severe weather.

- H Cuffley, *c.* 200 on Jan. 13th and 27th (TJ).
 M Hyde Park, one on the football pitches on Jan. 16th (CHH, CHFP). Regent's Park, seven on Jan. 1st, five on the 3rd, two on the 14th and one on Feb. 1st, one on Apr. 4th, one on Dec. 7th and 29th (DIMW, RCG, EHW). All except Apr. 4th and Dec. 7th were associated with hard weather movements. St. James's Park, one on Jan. 2nd (*Royal Parks Report*).

410 Corn Bunting

If the reports submitted fairly represent the distribution of this species in 1962 it is suffering a serious decline. All records would be welcome.

- E Wennington, two cocks on May 28th (AFH).
 H Cuffley, 30 on Jan. 14th, eight on Apr. 7th (TJ). Maple Cross, five on Jan. 6th (BPP), one on Apr. 15th (IGJ). Old Parkbury, one singing on Nov. 24th (EHW). Rye Meads, 20 on Mar. 4th (RMRG).
 M Brent Res., one on Jan. 6th (LAB). Cranford, two singing on Apr. 12th; Harlington, one singing on Apr. 12th (HJF). Inner London: Regent's Park, one on Mar. 31st flying W.N.W. (DIMW).
 K Bromley Common, one on Oct. 19th; Bexley, one at Joyden's Wood on Oct. 27th (KOSB). North Cray, one singing on Apr. 8th (RWC, JCI) may refer to the same area as the Joyden's Wood record.
 S Addington, one on Dec. 26th (DS). Farleigh, two on Apr. 10th and 12th, one on June 9th and July 22nd (SDT). Holmethorpe, one flying S.W. on Oct. 28th (DW). Molesey Res., a male on Apr. 19th but not subsequently (WRI). Walton, five on Feb. 25th the only record (GHG).

415 Cirl Bunting

- H Old Parkbury, a hen on June 30th (CC).
 S Godstone S.F., a cock singing on June 8th (AJG). Shirley, a cock on Mar. 25th (RGB, AJG).

421 Reed Bunting

- M Inner London: Kensington Gardens, one on Feb. 8th (RFS). Regent's Park, one on Apr. 6th and 11th (RCG), one on Dec. 29th (DIMW).

423 Snow Bunting

The records for Swanscombe Marsh refer to by far the largest flocks seen in the London Area, although parties of this size are not unusual in the Kent marshes a few miles east of our area.

- M Brent Res., one on Jan. 7th, two cocks Nov. 11th, single birds Nov. 17th and Dec. 28th (LAB, EHW). Perry Oaks S.F., one on Nov. 17th two on Dec. 29th (AJC, MJCd). Queen Mary Res., three on Oct. 27th (MC). Staines Res., a cock on Dec. 25th (LAB).
 K Elmers End S.F., a hen on Nov. 3rd and 4th (TK, PM). Swanscombe Marsh, *c.* 40 on Dec. 2nd; up to 20 until the end of the year (KHP *et al.*).
 S Barn Elms Res., one on Oct. 21st and Dec. 28th, two on Dec. 29th (ASC, PJSn *et al.*). Ewell, one flying W., calling, on Nov. 17th (RFP).

424 Tree Sparrow

Observers are requested to report the location and size of any breeding colonies not mentioned in the report that appears elsewhere in this issue.

M Inner London: Regent's Park, three on Jan. 3rd and 20th, one on Mar. 30th, four on Apr. 1st, two on Aug. 14th, three on Oct. 20th (RCG, DIMW).

Corrections to the London Bird Report, 1961

Errata

- Page 8* A. W. Bartlet should read A. W. Bartlett and H. Hennell and J. Hennell should read H. ffennell and J. ffennell.
- Page 23* Canada Goose, delete reference to New Haw which lies just outside the L.N.H.S. boundary (GHG).
- Page 24* Whooper Swan, King George VI Res., should read King George V Res.
- Page 33* Curlew Sandpiper, Brentwood S.F. should be deleted. This record refers to a Common Sandpiper (RBW)
- Page 35* Herring Gull, Dukes Meadows, Chiswick should be deleted. This record refers to Lesser Black-backed Gull (RHK)
- Page 41* Line 4. New Ham should read New Haw, and as New Haw is outside the L.N.H.S. area, the record should be deleted (GHG)

Additions to the London Bird Report, 1961

49 Gadwall

H Hilfield Park Res., a pair on Oct. 13th (BLS).

55 Scaup

H Hilfield Park Res., a duck on Mar. 4th (LAB).

The Breeding Distribution of the Tree Sparrow

By BRYAN L. SAGE

Introduction

The Tree Sparrow (*Passer montanus*) is an interesting species whose ecology and general biology have been less studied than is the case with its close relative the House Sparrow (*P. domesticus*). In those parts of the eastern Palaearctic Region and the Oriental Region from which the House Sparrow is absent, the Tree Sparrow behaves as a "house" sparrow and occupies the niche which in Europe is associated with the true House Sparrow. Where the ranges of the two species are sympatric *montanus* is usually forced out as a commensal of man and occupies a more rural type of habitat than *domesticus*.

The present study on the breeding-season distribution of the Tree Sparrow in the London Area is based primarily on records collected during 1961 and 1962. However, as there appears to have been no attempt since 1934 (*London Nat.*, pp. 123-124) to bring together in one place the fairly extensive data for previous years, it was considered that it would be valuable to include an historical section so that there would be a firm basis for comparison of future changes in breeding status. The main purpose of the recent enquiry was to gain some idea of the current breeding status of the species in the area as a whole; to ascertain the inner limits of the breeding range; and to collect data on the type of nesting sites used. From the point of view of accurate census work the Tree Sparrow is not an ideal subject. Although frequently breeding in colonies of varying size which are relatively easy to locate and count, there is also a very considerable population of odd pairs scattered over a wide area. Therefore, the data presented here does not purport to be an exact assessment of the total breeding population of the area.

Historical

Prior to about the late 1930's there is a distinct paucity of information on the earlier status of the Tree Sparrow in the London Area, but more information was collected in later years. All the breeding season data for the period up to and including 1960 is summarized below under counties, the sole exception being that part of Buckinghamshire which lies in the London Area, and for which I have been unable to locate any records other than reported breeding in the Colnebrook area in 1931.

ESSEX—W. E. Glegg (1929) gives very little help, classing it as not uncommon and generally distributed in the breeding season. He does, however, mention a nest in a haystack at the Lea valley Reservoirs in 1914. It was reported as an annual breeding species at Romford by 1919, and in

1933 a nest was found in Knightsland Wood, Toothill. By 1934 it was breeding or suspected of doing so at odd localities in the Lea valley, Chingford, Navestock, between Theydon Bois and Abridge, Wanstead Park and Weald Park. It was reported as resident at Romford S.F. in 1939. In 1941 it was breeding quite numerously in nesting boxes at Great Parndon. Breeding was reported at Sewardstone in 1944 and 1945, and at the same time three colonies were located at Chingford. The *Essex Bird Report* for 1952 and 1953 listed the following as breeding localities—Aveley, 19 pairs; Chingford, 1 pair; Hainault Forest, 2 pairs; Hutton, near Brentwood, 15 to 20 pairs; Lea valley, several scattered localities; Ockendon to Upminster, a few pairs; Navestock, 2 pairs; Roding Valley, up to 6 pairs; Sewardstone, a minimum of 5 pairs; in the area bounded by Romford, Rainham, Stifford and Bulphan it was estimated that *c.* 100 pairs were breeding, including *c.* 20 pairs at Romford S.F., the area south of Romford was thought to be the stronghold of the species in Essex; Woodford, 6 pairs. In 1956 a few nests were found in Sand Martin burrows at Dagenham G.P., and it was recorded also in the breeding season at Brentwood S.F., Upminster Common, Warley, and Walthamstow Reservoirs (4 pairs). In 1957 there were 5 pairs at Hainault Lodge, and 8 pairs at Epping Green in 1959. The Walthamstow Reservoirs breeding population was 8 pairs in 1960.

HERTFORDSHIRE—The first mention of breeding in the Colne Valley was at Watford in 1904, and in 1914 6 nests were found in willows. Small numbers apparently bred annually in the Watford area, and in 1952 there were 12 pairs at Watford S.F. and Hamper Mill. Further up the Colne, a small colony was found at the Old Parkbury G.P.s., Radlett, in 1945. In 1949 colonies of up to 6 pairs existed at Arkley, Totteridge, London Colney, Moor Mill, and Old Parkbury. In 1950 *c.* 50 pairs bred at eight localities in the area Radlett, Colney Heath, North Mimms, Ridge, Arkley and Dyrham Park (Middx.). The Old Parkbury colony numbered 6 pairs in 1952 and 12 to 15 pairs in 1953. At the Smallford G.P.s., near St. Albans, several pairs bred in 1959. At Elstree a single pair bred in 1933. In 1956 there were 10 pairs at Hilfield Park Reservoir, but by 1959 there were only 4 to 5 pairs. In the Northaw area there were 5 pairs in Hook Wood, and 3 pairs in Nyn Park in 1960. There is rather less data for the Lea valley (Herts. section) where a nest was reported from Cheshunt in 1939. It was stated in 1949 that the Rye Meads colony had then been in existence for some years, and breeding had also been recorded at Broxbourne and Hoddesdon. In 1953 10 pairs bred on Cheshunt Marsh, and in 1954 there were from 15 to 20 pairs between there and Broxbourne, all nests being in pollarded willows.

KENT—Ticehurst (1909) classed it as somewhat rare, but mentioned an extensive aggregate of colonies in the north-west at Beckenham, Bromley, Hayes, Keston and West Wickham, as being the largest in the county. According to Harrison (1953) it has decreased as a breeding species in those areas. At Chislehurst a single pair bred in 1942 and 3 pairs in 1943. Breeding was suspected at Danson Park, Welling, in 1929 to 1930, and in 1959 one pair definitely bred. It was reported from Dartford in 1929, but

there appears to have been no further mention of it until 1949 when there were 10 breeding pairs on the marshes. In 1950 there were only 6 pairs, and from 1951 to 1953 a few pairs bred in two small colonies; there seems to be no later information. On the Stone Marshes breeding was first reported in 1951 with 2 pairs, and in 1952 there were 3 pairs; breeding continued there until at least 1955. Small numbers were reported as being resident at Westerham in 1941, but nothing seems to have been reported in subsequent years. A total of 4 pairs bred at Downe in 1958. The history of the colony at Elmers End S.F. is well known, commencing with up to 2 pairs from 1949 to 1953, by 1959 there were 20 breeding pairs. The only record from Greenhithe seems to be a report of its presence in 1929. At Lullingstone Park a single pair bred in 1958, but in 1959 there were 8 pairs. A single pair bred at Shoreham in 1958.

MIDDLESEX.—This county is of interest as it comprises the most heavily urbanized part of the area. The history of the Tree Sparrow therein is reasonably well documented and is given below in some detail. Glegg (1925) gave the then current breeding distribution as Enfield Chase, Colne Valley, Lower Crane Valley, Elstree, Uxbridge, Stanmore, Dugdale Hill (Potters Bar), Harrow, Edgware, and Edmonton S.F.

Harting (1866) classed it as a non-breeding visitor and clearly knew of no instance of breeding, but Barrett-Hamilton (1892) stated that one or two pairs had bred at Sudbury Grove in 1828 to 1832; these appear to be the first breeding records for the county. A pair bred at Hampstead in 1871 and it was classed as resident in 1913 but no details were mentioned (Hampstead Scientific Soc. 1913). It was reported from the Harrow district in 1876, again in 1882, and by 1888 to 1893 had increased and was breeding annually. Between 1899 and 1903 nests were found in willows along the upper reaches of the Yeading Brook, and also at Harrow. Harrisson (1930) writing of this district regarded it as very local with small colonies at South Harrow (Roxeth), Edgware and Elstree in 1928. T. L. Bartlett has watched in the Harrow area since 1925 and always considered it very local so far as breeding was concerned, it was particularly fond of the vicinity of sewage farms. Since 1936 some 20 of the smaller sewage farms in N.W. Middlesex have been closed down with a consequent effect on the Tree Sparrow. At Roxeth it bred from 1900 to 1924 at 5 colonies; by 1927 only two of these survived, and breeding finally ceased in 1944.

In the Lower Brent Valley, Read (1896) knew it as scarce, but mentioned a nest found between Perivale and Greenford in that year. Another nest was found near Hanger Lane in 1899, and by 1905 there were several pairs breeding in willows at Horsendon Hill and one pair in a haystack. In the Perivale Sanctuary more than 12 pairs occupied nesting boxes in 1910 but the numbers decreased sometime after 1934.

The later history of the species in the county as revealed by the L.N.H.S. records can now be examined. In 1933 a colony of about 15 pairs was located on Barn Hill at Wembley, breeding was attempted there again in 1939 and probably in 1945, there are no records subsequent to the latter year. The Edgware-Mill Hill-Elstree (Brockley Hill) sites were known at

least as far back as the early 1920's and breeding was reported in the area in 1939, 1944, and 1946 to 1949. In 1951 to 1952 and 1955 only one pair bred at Mill Hill. In 1906 several nests were found in a haystack at Staines, following which there was a period without records until 1939 when breeding was reported at Staines Moor. From 1945 to 1947 it bred at Hanworth. There were breeding season records from Ashford and Feltham in 1945, it bred at the former place in 1948 and there were 10 pairs at Feltham in 1949 to 1950. In 1946 it nested at Heathrow Airport, and was seen in the breeding-season at Brent Reservoir, Hatton, Shepperton, Staines and Twickenham. Breeding occurred on Staines Moor in 1948 and 1954. Four pairs bred at Harlington in 1949. In 1950 the evidence suggested that numerous pairs were breeding in the area Osterley Park-West Drayton-Staines. A single pair bred at Perry Oaks S.F. in 1952 to 1953. In the latter year there were also breeding records as follows—Cranford Wood 1 pair (2 pairs in 1957); Harlington 4 pairs; Hounslow Heath 4 pairs; Longford 1 pair; Stanwell 1 pair; and Stanwell Moor 8 pairs. In 1955 a total of 87 nests were found between Perry Oaks S.F. and Stanwell Moor, and others at Harefield, Hendon and Brent Reservoir. In Osterley Park 10 breeding pairs were present in 1957.

At Ruislip breeding was reported from Howletts Lane in 1947 and probably Ruislip Marsh in 1949, and 2 pairs in 1951 and 1954. B. P. Pickess has kindly supplied the following details of subsequent breeding history up to 1960—Knightscode Farm, Harefield, 6 to 10 pairs annually from 1955 to 1959; Pinner Park Farm, 3 pairs from 1955 to 1960; Fire Bush Lane, Ruislip, 2 pairs bred in sycamores in 1955 and 1956; Breakspear Road, Harefield, 5 pairs from 1955 to 1957; Brackenbury Farm, Harefield, at least 3 pairs in pollarded willows in 1955; and Old Park Wood/Harefield Hospital area, 2 to 3 pairs in 1955 and 1956.

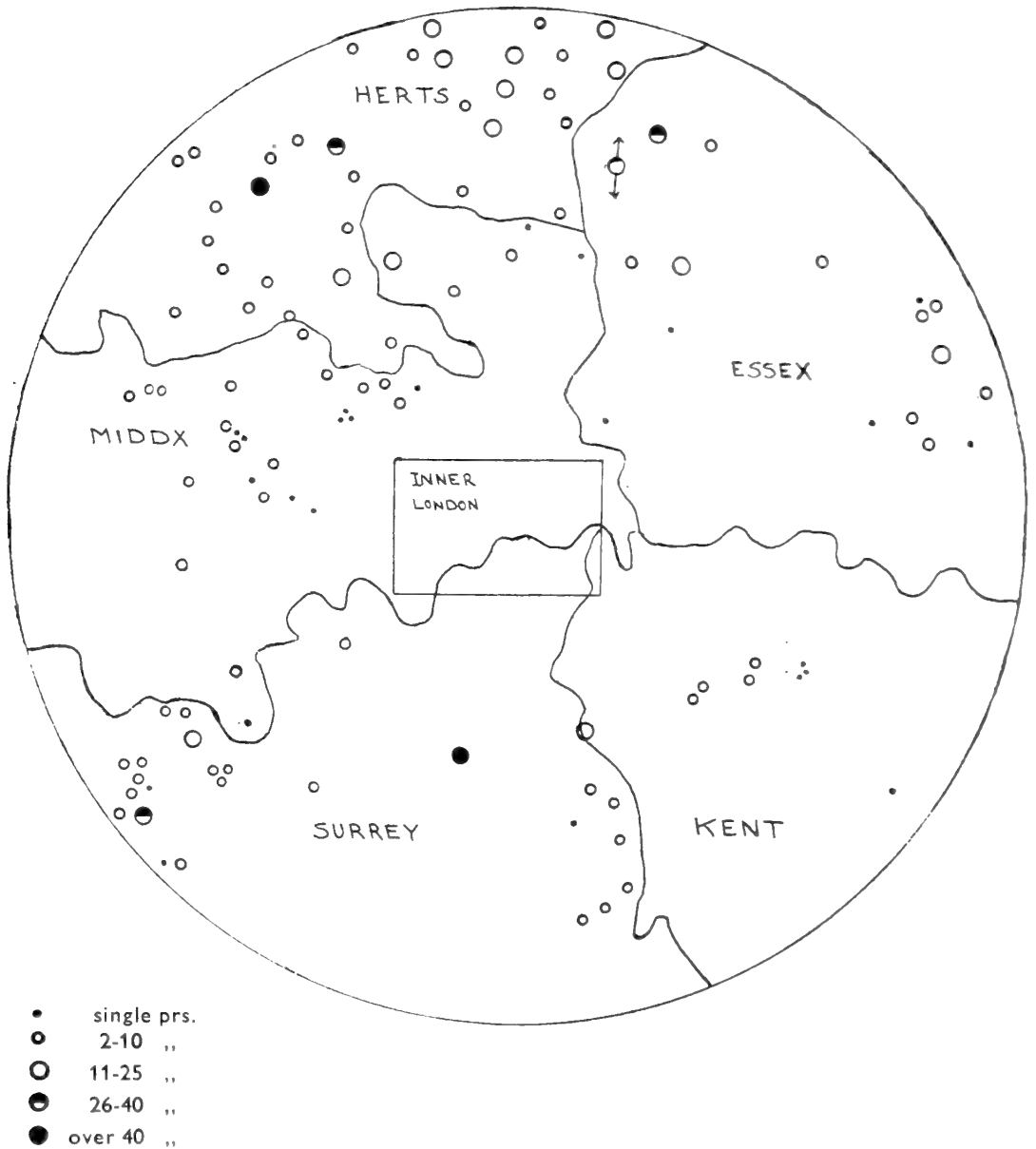
Subsequent to Glegg's (1925) mention of it as breeding at Enfield Chase, there were apparently no further reports of it from that area until 1946; in 1954 and 1958 a single pair bred at Enfield Lock. In 1958 2 pairs also bred in Trent Park at Cockfosters. A colony of not more than 6 pairs was reported from Dyrham Park in 1949 and 1950.

SURREY—Bucknill (1900) merely states that it bred very locally in small colonies but was rare near the Metropolis. He mentions a record of breeding near Wimbledon, and the existence until 1896 of a colony of about 20 pairs in pollarded willows near Epsom. In Richmond Park it was first recorded as breeding in 1904, and up to 2 pairs appear to have bred in almost every subsequent year. In 1946 breeding was reported from Richmond Hill.

The history of the Beddington S.F. colony commences with reports of breeding in 1912, 1914, and 1929 to 1934; by 1936 about 6 pairs were said to be resident. In 1941 a pair nested in a heap of bricks. Breeding occurred again in 1946 and subsequently as follows—1947 1 pair; 1948 3 pairs; 1949 2 pairs; 1950 11 pairs; 1951 44 pairs; 1952 51 pairs; 1953 40 to 50 pairs; 1954 54 pairs 1955 78 pairs, and 1956 to 1960 in about the same or slightly smaller numbers. Breeding in Beddington Park was first mention-

ed in 1942, in 1952 15 pairs were breeding there, in 1954 25 pairs, and in 1955 15 to 20 pairs. Another well known regular breeding haunt was Epsom S.F., where there were 30 pairs in 1958.

In 1939 an attempt at breeding occurred on Mitcham Common. This was followed by the successful breeding of 2 pairs in 1953 and 10 pairs in 1954, but in 1955 only 2 pairs bred. Breeding also occurred on Mitcham Watermeads in 1946.



Map showing the distribution of known breeding sites of the Tree Sparrow in the London Area in 1961-1962

Other isolated breeding records are Banstead in 1915; Molesey Reservoirs in 1932; present at Mickleham in the breeding-season of 1945; one pair at South Norwood Lake in 1954; 4 pairs at Morden in 1956; 4 or 5 pairs by the River Mole at Cobham, 6 pairs at Esher S.F., and 3 pairs at Hersham S.F. in 1957; in 1958 10 pairs bred in the area of Wey Manor Farm at Addlestone; in 1959 there were 29 breeding pairs in the Wey Manor Farm—New Lines Pond area. At Walton G.Ps. 2 pairs bred from 1948 to 1950 and one pair in 1951. At Ham G.Ps. 2 pairs bred in 1949 and single pairs in 1951 and 1954. Two pairs bred at Ham House in 1955 and one pair in 1960.

It is of interest to note that Pounds (1952) could give no instance of breeding for the North Downs area at Farleigh, and that in the rectangle bounded by Headley-Buckland-Westcott-Polesden Lacey, in 12 years of observation from 1949 G. M. Chapman saw only one solitary Tree Sparrow.

The 1961-1962 Survey

The total number of breeding pairs reported during this survey was about 745 representing the absolute minimum population. The number of pairs in each county was as follows:—

<i>Essex</i>	<i>Hertfordshire</i>	<i>Kent</i>	<i>Middlesex</i>	<i>Surrey</i>
101	308	47	101	188

The actual localities and the number of pairs recorded are shown below under counties, the localities are given in alphabetical and not geographical order.

<i>Essex</i>					
Brentwood S.F.	...	...	2	Navestock Village	... 2
Chingford	...	...	1	Navestock Hall	... 5 min.
Epping Forest	...	...	12	Nazeing Park	... 30
Epping Green	...	...	3	Passingford Bridge	... 3
Fishers Green to Nazeing G.Ps.	20			South Weald Park	... 10
Great Warley (Moor Lane)	1			Tyler's Common, S.E. of	2
nr. Harold Wood Station	...	1		Waltham Abbey to	
Harold Wood (Nag's Head Lane)	2			Gilwell Park	... 5
Navestock Common	...	1		Walthamstow Reservoirs	1

The area around Nazeing Park and Roydon is one of the strongholds of this species, and it is known that other smaller colonies exist. It was not possible to obtain coverage of the area south of Romford which was known at one time to have a considerable breeding population, the number of pairs in this area is probably still quite high although no nests were found at Romford S.F. in 1960.

Hertfordshire

Aldenham	...	...	10	Hilfield Park Res.	...	3
Bayford (Blackfan Wood)	...	...	2	London Colney	...	3
Bedmond (two sites)	...	...	6	Mimms Woods...	...	3
Borehamwood-Shenley	...	...	14 min.	Monks Green	...	20
Brickendonbury	...	...	12	Moor Mill	...	5
Broxbourne (Lucerne Warren)	2			Napsbury	...	8
Broxbourne S.F.	...	...	2	Northaw (Nyn Park)		5
Broxbourne Woods	...	...	11	Panshanger (3 sites)	...	23
Elstree } two sites	...	...	8	Radlett (Old Parkbury)		45
Elstree }	...	...	4	Ridge	...	3
Essendon	...	...	4	Rye Meads	...	15-20
Essendon (Water Hall)	...	...	15	Stanborough	...	2
Great Amwell	...	...	20	Totteridge	...	4
Hamper Mill	...	...	2	Tyttenhanger Park	...	40
Hertford Heath } two sites	...	...	8	Waltham Cross...	...	2
Hertford Heath }	...	...	2			

Coverage in the county was virtually complete and it is doubtful if any other than a few small colonies and scattered breeding pairs were overlooked.

Kent

Albany Park (R. Cray)	...	2 min.	Joydens Wood (Birchwood Road)	...	1
Elmers End S.F. and cemetery	...	22-25	Joydens Wood (Mt. Misery)		1
Eynsford (Lullingstone)	...	1	Petts Wood	...	3
Foots Cray Meadows	...	5	Petts Wood (Botany Bay Lane)	...	8
Joydens Wood (Bunkers Hill)	1				

It was not possible to cover West Kent completely, but in view of the previous distributional history of the species it seems unlikely that any major colonies were missed.

Middlesex

Brent Res. (3 sites)	...	3	Hendon Wood Lane	...	4
Bushy Park (3 sites)	...	3	Horsendon Hill	...	2
Dyrham Park	...	20	Mill Hill (golf links)	...	10
Enfield	...	4	Mill Hill (Arrandene)	...	2
Enfield Lock	...	1	Mill Hill (Folly Farm)		6
Finchley (Nether Court golf links)	...	1	Mill Hill (Burton Hole)		2
Gutteridge Wood...	...	2	Osterley Park	...	10
Hampton Court	...	1	Perivale Park	...	2
Hanger Hill Wood	...	1	Perivale Wood	...	1
Harrow (Northwick Park)	2		Pinner Park Farm	...	3
(Sudbury Hill)	...	2	Pitshanger Park	...	1
(Copse Wood)	...	1	Ruislip (Poors Field)	...	3 min.
(Peterborough Hill)	1		Ruislip Common	...	4
Hendon (Archfield allotments)	...	4	Ruislip Nature Reserve	...	2
			Trent Park	...	2
			Whitewebbs Park	...	1

In addition to the above records definite nil returns were submitted for N.W. London in the areas Regent's Park, Swiss Cottage, Cricklewood, Hampstead, Highgate, Golders Green, and the Finchleys (one exception); these are all more or less completely built-up areas. The species was also absent from Colindale and Edgware (mixed parkland and suburban gardens); Stanmore area, comprising suburban districts with some large gardens, parkland at Bentley Priory, Pear Wood, and the birch/bracken association of Stanmore Common; Harrow Weald, which is also mainly birch and bracken.

On the whole coverage of the county was good, the only serious exception being S.W. Middlesex in the area Staines to Perry Oaks S.F. where a fairly heavy population was reported in 1955. There is no reason to suppose that the situation has greatly changed in this area, so that the figure of 101 pairs for Middlesex is certainly a considerable underestimate.

Surrey

Addington (Frylands Wood)	2	Hersham	...	...	3
Addington	...	Hogsmill River	...	...	3
Addlestone	...	Richmond Park	...	...	6
Addlestone-Weybridge		Walton-on-Thames	...		6
(6 sites)	...	Apps Court Farm	...		14
Weybridge	...	Walton Res. coal yard			6
Weybridge (Brooklands)...	4	Warlingham (Holt Wood)			1
Beddington S.F.	...	Weylands S.F.	...	...	6
Chelsham	...	Woldingham (Nore Hill G.P.)			2
Fickleshole	...	Woldingham (Worms Heath)			4

The coverage achieved in the county was not complete, but it is unlikely that any large colonies were missed; unfortunately the Epsom S.F. site was not checked and there may well still be a strong breeding colony there. The previous history of the species in Surrey indicates that it has always been very local, this is no doubt due to a large extent to the fact that it does not favour the birch/bracken type of country which is so widespread there.

The Inner Limits of the Breeding Distribution

In *The Birds of the London Area Since 1900* (1957) which dealt with the period up to 1954 it was stated that there was no evidence of any general change in the breeding status, even to the extent of a retreat before the builder in the suburbs. Whilst this may be true of the area as a whole, it is clear that local changes in distribution are taking place nearly all the time. The larger breeding colonies are fairly consistent, but many of the smaller ones last for only short periods as the previous history of the species illustrates. The foothold of the Tree Sparrow in the built-up areas is precarious to say the least, and is generally restricted to scattered pairs, the Elmers End S.F. and Beddington S.F. colonies are the only large ones existing within 10 miles of St. Paul's Cathedral. The inner limit of breeding records up to 1954 was given as Greenwich Park (not since 1947), Chislehurst, Elmers End, Beddington, Mitcham, Twickenham (1946), Richmond Park, Osterley Park, Horsendon Hill, Barn Hill (1945), Hendon, Mill Hill,

Finchley, Enfield, Chingford, Walthamstow, Woodford Bridge, and Upminster. The inner limits of the breeding records for 1961 to 1962 are shown below together with the approximate distance in miles from St. Paul's.

Albany Park and Foots Cray Meadows	11	Hanger Hill Wood	8½
Petts Wood	10½	Brent Reservoir	7
Elmers End S.F.	8½	Hendon	7½
Beddington S.F.	9½	Mill Hill	9
Richmond Park	9½	Trent Park	10
Osterley Park	11	Walthamstow	9

The above data shows that during the past seven years or so the inner limits of breeding have remained fairly stable.

Nest Sites and Habitat

Details regarding the type of nest site were received for 506 of the total of about 745 pairs reported. The number of pairs using the various types of nesting site are shown below.

Hawthorn hedge	11	Alder	12
Conifers	5	Sweet Chestnut	14
Poplars	21	Oak	179
Willows	123	Beech	3
Horse Chestnut	6	Machinery at gravel pits	3
Ash	3	Disused mill	2
Sycamore	6	Structure of Crow's nest	1
Elms	77	Concrete walls of sprinklers	20
Concrete dyke walls	20		

Virtually all the tree nests are sited in holes in pollarded or decaying trees; the nests in the hawthorn hedge were of the typical untidy type built by sparrows when nesting in open sites. There were no reports of nests in buildings of any type.

It is quite obvious that the preferred habitats of the Tree Sparrow are river valleys such as those of the Colne and Lea where pollarded willows etc. are most numerous; gravel pits, which are frequently in river valleys; and open parkland of the type with ancient oaks and hornbeams, such as are found at Dyrham Park, South Weald Park and Nazcing Park. It is not a bird of dense woodland, and woodland nesting sites such as those in Mimms Woods and Broxbourne Woods are on the periphery or in old trees left in cleared or open areas. In addition there are the more specialized types of habitat, such as Beddington S.F. where the concrete walls of dykes and sprinkler beds are utilized. Nesting sites in pure agricultural land and the more urbanized areas are generally isolated oaks or other suitable trees which only support odd pairs.



PLATE 1. IMMATURE SHAG (*photographed by W. H. Dady*)



PLATE 2. TREE SPARROW *Passer montanus* (F. H. S. G. FRPS)

Acknowledgments

I am most grateful to the following observers who participated in this enquiry or who supplied other information, many of them covered wide areas in search of Tree Sparrows—T. L. Bartlett, L. A. Batten, E. D. Bushby, G. M. Chapman, the Committee and Observers for the Royal Parks, S. Cramp, C. H. Flower, T. W. Gladwin, A. E. Goodall, Miss N. Goom, G. H. Gush, J. D. Magee, B. S. Meadows, P. Meredith, B. S. Nau, K. Palmer, B. P. Pickness, R. N. F. Simpson, P. M. Solly, D. Stephens, P. J. Strangeman, A. G. Verrall, Prof. E. H. Warmington, and R. B. Warren

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Bird Life on a Sewage Disposal Works

By DONALD PARR

A study of the bird life of Weylands Sewage Works, Hersham, Surrey

Summary

1. The position, size, topography of Weylands Sewage Works is described and the system of sewage disposal utilized at the works is briefly explained.
2. It is shown that the area covered by the works can be divided into nine principal habitats and each of these together with its dominant associated flora and animal fauna is described.
3. It is postulated that the birds using the works fall into six distinct categories and these are described and detailed, viz:—
 - (a) Resident or regular and irregular winter visitors. During the study period a total of 47 different species (31 resident or regular and 16 irregular) were noted in this category and the average winter population of the works was in the region of 1,000 to 1,500 birds. The effect of hard weather is briefly mentioned.
 - (b) Spring migrants.
 - (c) Breeding birds. It has been shown that the works support a large concentration of breeding birds and not less than 80 pairs of approximately 20 different species are shown to have bred in 1961 and 1962. The success and factors limiting the success of these breeding birds are discussed. It is shown also that the works provide habitats that are rapidly disappearing in the London countryside and birds that are threatened with local extinction find, in some years, favourable breeding conditions on the works.
 - (d) Summer visitors. The number and variety of non breeding birds that use the works during the summer is detailed.
 - (e) Late summer and autumn flocks and family parties. A number of birds congregate on the works in the late summer and autumn in various associations, principally for feeding. These are described.
 - (f) Autumn migrants.
4. A diurnal rhythm of birds using the works has been noticed and is described and the difference between summer and winter is brought out.
5. A detailed analysis is attempted of the various types of food available in the different habitats and the number and variety of the birds feeding thereon.

Introduction

Position

Weylands Sewage Works lies within the London Basin in the vice-county of Surrey. It adjoins Hersham Station (grid reference 51-122654) on the main railway line from Surbiton to Woking. It covers an area of 26 acres. It is flat and its shape wedgelike, with its tip forming the extreme easterly point of the works. The works were opened in 1900. The first filter beds were built in 1918 and were extended in 1939-40 and 1959.

Boundaries

The southern boundary is the railway line embankment along which runs a double line of pollarded poplar trees (*Populus × canadensis*). Beyond the railway to the south is farm land. Immediately to the west of the works is an industrial estate and beyond that the suburban sprawl of Walton-upon-Thames. The northern boundary is a chain link fence separating the works from a public footpath. The land to the north of this path is a market garden. Along the eastern tip of the works is a short hawthorn hedge and within a few yards of this is the River Mole, flowing at this point roughly south to north. The works lie, therefore, in the fairly narrow arm of open country which separates the suburban developments of Walton to the west and Esher to the east.

System of Sewage Disposal

The crude sewage is first pumped into a series of sedimentation tanks; screens at one end of these tanks retain larger floating debris and much fine suspended matter settles slowly to the bottom of the tanks aided by the slope of the tank floors. The liquid effluent flowing from the sedimentation tanks is thus partially cleaned, and then fed by moving rotary arms over the surface of a series of percolating filters (sprinklers), twelve in all. These filters are built of clinker, are about 6 feet deep, circular, about 60 feet in diameter and become the habitat of a great mass of plant and animal life forming a gelatinous matrix called Zooglaea—a complex association of Algae, Bacteria, Fungi, Protozoa and dipterous larvae. The biological activity of this mass aerates and purifies the applied liquid, the organic wastes are oxidized or converted into the living matter of the Zooglaea. This process also causes much finely divided dejecta (humus) to be passed into the liquid. The effluent from the filters is then directed into a series of small humus tanks where a substantial proportion of the humus still in suspension is trapped. The effluent from the humus tanks, still containing fine particles of humus in suspension then flows into one of three humus beds. These beds stretch almost the whole length of the works and measure approximately 400 yards long by 20 yards wide. They were originally ploughed earth bounded by earth banks, two or three feet high, and in them a rich flora of aquatic plants develops. The last traces of suspended humus are deposited in these beds and the final purified effluent flows into the River Mole.

The semi-liquid solid matter trapped in the sedimentation tanks is pumped onto prepared beds of straw, known as sludge beds. Each bed measures approximately 30 by 90 feet and is bounded by cement walls 4 feet high. The beds when filled are left undisturbed for several weeks. Bacterial action begins the decomposition of the straw and the conversion of the mixture into a compost. This compost is then removed by mechanical means and dumped in substantial piles on waste ground within the works.

Description of Habitats

The area of the works can be conveniently divided into nine distinct habitats namely:

1. Buildings
2. Sedimentation tanks
3. Sprinklers
4. Lawns
5. Sludge beds
6. Compost heaps and straw
7. Humus tanks
8. Humus beds
9. Waste ground

A detailed description of these habitats and their attendant animal and plant associations follows:—

The Buildings

These comprise the manager's house, the pumping station, a large detached garage and a small tractor shed. All except the last are concentrated in the S.W. corner of the works.

Sedimentation Tanks

There are five of these arranged in parallel and measuring approximately 50 by 20 feet. They adjoin the pumping station and are raised about 10 feet above the level of their surrounds.

Sprinklers

Eight of the sprinklers are built entirely of clinker whereas the group of four that were built three years ago have the retaining walls of brick. The association of plant and animal life that thrives on this habitat has already been mentioned but of particular importance in this study are the oligochaet worms and the dipterous larvae.

Lawns

Most of the ground immediately surrounding the sprinklers is maintained as lawn. Dipterous larvae (particularly Tipulidae) and oligochaet worms are abundant in this medium.

Sludge Beds

During the summer months vast numbers of Diptera hatch and cover the surface of the drying sludge and the larvae feed in the surface layers. Grain is associated with the straw which is spread on the beds.

Compost Heaps

The bacterial content of the composting material is, of course, very high and it provides an ideal habitat for dipterous larvae, particularly Borboridae and Chironomidae. Also abundant are Annelida, Arachnida (Araneae and Acari), Coleoptera, Collembola and Crustacea (Isopoda).

If the heaps remain undisturbed long enough a flora becomes established but this rarely is able to seed and is of little significance as a source of bird food.

Humus Tanks

The humus tanks cover only a comparatively small area and are of no significance as feeding areas. They are, however, frequently used as bathing stations for such species as Starling, House Sparrow and Pied Wagtail.

Humus Beds

As already described there are three principal humus beds (numbered 1 to 3) on the sketch plan. A fourth small bed (No. 4) adjoins the southernmost bed; this bed is really a disused sludge bed but the effluent seeps into it from bed No. 3 and it can be regarded as an identical habitat to the principal beds. The beds are not all in use at the same time. During 1959 and 1960 beds 1 and 2 were used and effluent was continuously passed through them. Early in 1961 the effluent was diverted into No. 3 bed but standing water remained in the western halves of beds 1 and 2. At infrequent intervals the beds are dried and ploughed but this had not been accomplished for a number of years prior to 1962. Early in 1962 bed No. 1 was partially cleared and during the summer work was begun on clearing the three remaining beds (2 to 4). Whilst carrying the flow of effluent the water runs to a depth varying from a few inches to one foot. Under normal conditions the rate of flow is about one foot per second but may be much increased at times of flood. The flora of the beds may develop without interference for a number of years and become very rich and varied. This may be affected by changes in the water flow; thus when a used bed, where aquatic plants have flourished, is dried out, the aquatic species tend to be swamped by weeds and grasses and vice versa. The following is a list of the principal plants of the beds during 1961/62.

<i>Species</i>	<i>Status</i>	<i>Species</i>	<i>Status</i>
Green filamentous algae	<i>a</i>	<i>Bidens cernua</i>	<i>f</i>
<i>Ranunculus repens</i>	<i>ld</i>	<i>Bidens tripartita</i>	<i>a</i>
<i>Ranunculus sceleratus</i>	<i>la</i>	<i>Alisma plantago-aquatica</i>	<i>f</i>
<i>Chenopodium album</i>	<i>la</i>	<i>Juncus bufonius</i>	<i>f</i>
<i>Chenopodium rubrum</i>	<i>f</i>	<i>Juncus effusus</i>	<i>f</i>
<i>Atriplex hastata</i>	<i>la</i>	<i>Lemna minor</i>	<i>a</i>
<i>Epilobium hirsutum</i>	<i>ld</i>	<i>Typha latifolia</i>	<i>ld</i>
<i>Polygonum persicaria</i>	<i>la</i>	<i>Eleocharis palustris</i>	<i>ld</i>
<i>Rumex obtusifolius</i>	<i>la</i>	<i>Glyceria plicata</i>	<i>ld</i>
<i>Urtica dioica</i>	<i>la</i>	<i>Poa trivialis</i>	<i>ld</i>
<i>Lycopus europaeus</i>	<i>f</i>	<i>Agropyron repens</i>	<i>ld</i>

Key:

a abundant
d dominant

f frequent
l locally

The banks dividing the beds are dominated by *Urtica dioica*. The beds themselves support a very rich and varied animal fauna, the following being the most abundant types:

Annelida	Oligochaet worms
	Hirudinea*
Arachnida	Araneae
	Acari
Insecta	Diptera and dipterous larvae:
	Syrphidae
	Chironomidae*
	Tipulidae
	Culicidae*
	Borboridae
	Psychodidae
	Ephydriidae
	Sepsidae
	Coleoptera-Chrysomelidae
	Collembola
Crustacea	Isopoda
	Cladocera*
Mollusca	Gastropoda

*confined to "wet" conditions.

Waste Areas

For the purposes of convenience and reference the waste areas have been divided into five marked A, B, C, D and E on the diagrammatical plan.

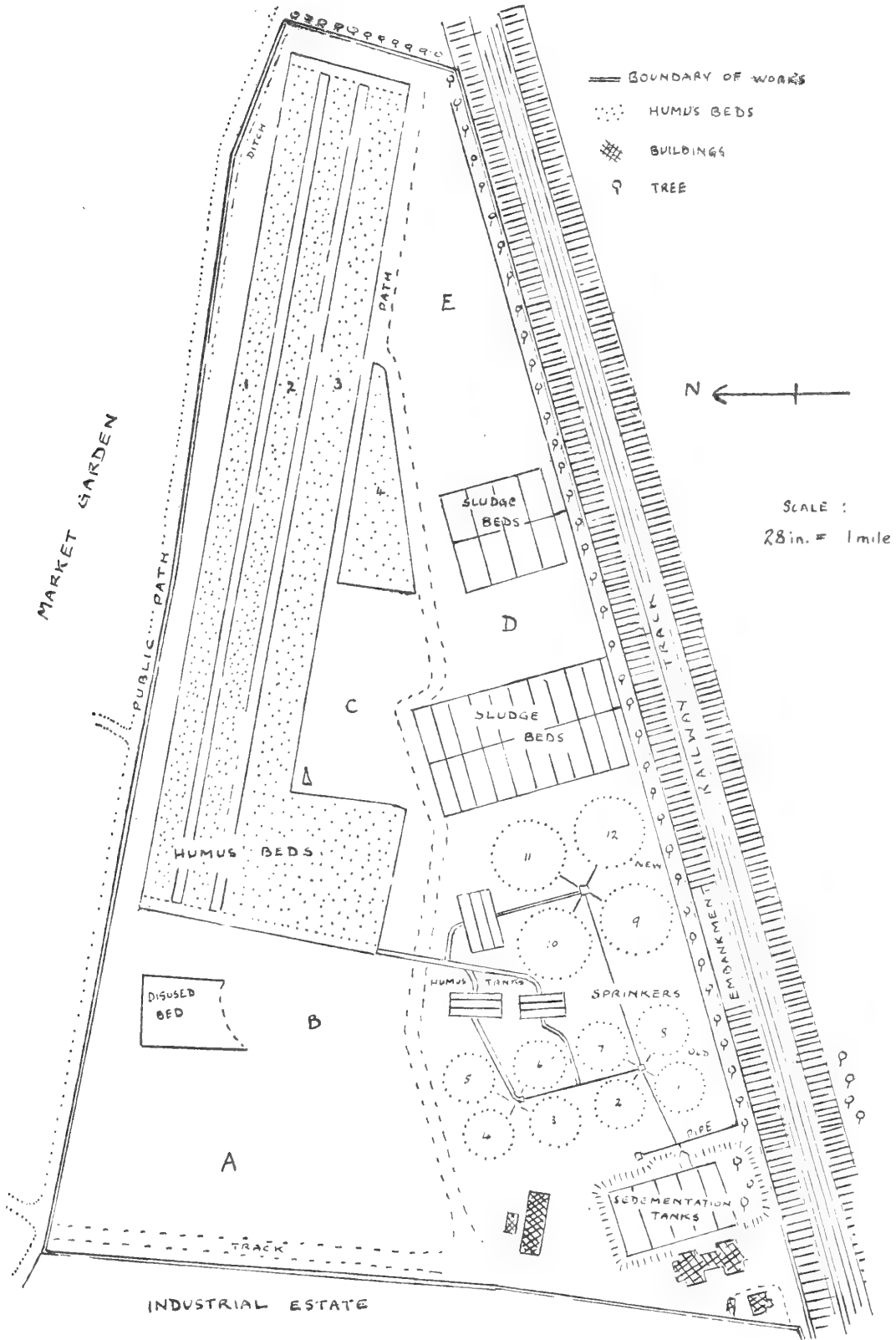
AREA A is the largest and covers the unused ground in the north-western corner of the works. During 1960 and the early part of 1961 a large pile of compost was dumped here but this was removed in the early summer of 1961 and the ground was left undisturbed until July 1962 when all the vegetation was cut. Some road sweepings are dumped on its southern edge. The area is dominated by weeds and grasses particularly:—

<i>Malva sylvestris</i>	<i>Atriplex hastata</i>
<i>Artemisia vulgaris</i>	<i>Dactylis glomerata</i>
<i>Chenopodium album</i>	<i>Agropyron repens</i>
<i>Chenopodium rubrum</i>	<i>Lolium perenne</i>
<i>Atriplex patula</i>	<i>Poa sps.</i>

These plants seeded freely during the summer of 1961. The area is rich in animal life particularly olegochaet worms, Arachnida, Insecta (Tipulidae etc.), Crustacea and Mollusca (Gastropoda).

AREA B.

This was formerly a humus bed but during 1961 was partially filled with rubbish and only about a third of the bed remained unfilled. The area is therefore essentially a dumping ground for inert matter and being much disturbed, vegetation develops only at its fringe and in the unfilled portion of the humus bed.



Weylands Sewage Works

AREA C.

This area is the geographical centre of the works. Compost was dumped here during 1961 but was cleared before the end of the year. Its edge is dominated by *Urtica dioica* and *Cirsium arvense*.

AREA D.

This is a small insignificant area separating the two series of sludge beds.

AREA E.

This area lies in the south eastern corner of the works. A series of sludge beds were originally in use here but in 1960 were allowed to lie fallow. In the autumn of 1961 the area was bulldozed and the identity of the separate beds destroyed. The flattened area formed a shallow depression which collected pools of water during the winter (1961/62) and a thick growth of grass (*Poa trivialis*) developed. The western fringe was also used as a dumping ground for compost from the sludge beds during the winter months of 1961 and throughout 1962.

Methods of Study

Regular weekly visits have been made to the works commencing in the spring of 1961, when a survey of the dominant vegetation of the works was undertaken. Information was also collected during the 1961 breeding season of all the birds breeding on the works and an attempt was made to assess the degree of success of these species; this was repeated in 1962.

On September 1st, 1961, a weekly count of all the birds present on the works was begun and regular notes made of feeding habits. An attempt was made to sample and identify the principal sources of food used by birds in each of the principal habitats. A record was kept of the changes in the vegetation and of all the mammals seen on the works. Birds were trapped and examined as opportunity arose and the weekly census was maintained until August, 1962.

Annual Rhythm

The birds using the works can be divided into the following broad categories, some species occurring, of course, in more than one category.

1. Winter residents or regular visitors.
2. Irregular winter visitors.
3. Spring migrants.
4. Breeding population.
5. Summer visitors using the works for regular feeding.
6. Flocks and family parties congregating in late summer and autumn.
7. Autumn migrants.

Spring migration lasts from March until June and by the time it starts, locally resident birds are already incubating. Autumn migration is already noticeable in July and lasts until October by which time many of the winter visitors have already arrived at the works. Flocking of some species begins in July and may continue throughout the winter.

Winter Visitors

During the winter of 1961/62 there were 31 resident or regular visiting species to the works and 16 irregular species. These species are listed in Table No. 1 and against each is an indication of the number of birds involved.

TABLE 1
WINTER 1961/62

<i>Resident—or regular visitors.</i>		<i>Irregular visitors.</i>	
Mallard	<i>c</i>	Heron	<i>a</i>
Teal	<i>c</i>	Partridge	<i>b</i>
Kestrel	<i>a</i>	Lapwing	<i>a</i>
Water Rail	<i>b</i>	Lesser Black-backed Gull	<i>a</i>
Moorhen	<i>e</i>	Herring Gull	<i>a</i>
Coot	<i>b</i>	Woodpigeon	<i>b</i>
Snipe	<i>c</i>	Lesser Spotted Woodpecker	<i>a</i>
Jack Snipe	<i>b</i>	Crow	<i>b</i>
Green Sandpiper	<i>a</i>	Jay	<i>a</i>
Common Gull	<i>b</i>	Mistle Thrush	<i>a</i>
Black-headed Gull	<i>g</i>	Fieldfare	<i>a</i>
Skylark	<i>c</i>	Redwing	<i>a</i>
Great Tit	<i>c</i>	Redpoll	<i>d</i>
Blue Tit	<i>c</i>	Bullfinch	<i>b</i>
Wren	<i>c</i>	Brambling	<i>c</i>
Song Thrush	<i>d</i>	Yellowhammer	<i>b</i>
Blackbird	<i>d</i>		
Stonechat	<i>b</i>		
Robin	<i>b</i>		
Duncock	<i>c</i>		
Meadow Pipit	<i>f</i>		
Pied Wagtail	<i>g</i>		
Grey Wagtail	<i>b</i>		
Starling	<i>h</i>		
Greenfinch	<i>d</i>	<i>a</i>	singletons
Goldfinch	<i>d</i>	<i>b</i>	2 - 5
Linnet	<i>d</i>	<i>c</i>	6 - 10
Chaffinch	<i>e</i>	<i>d</i>	11 - 20
Reed Bunting	<i>c</i>	<i>e</i>	21 - 40
House Sparrow	<i>g</i>	<i>f</i>	41 - 60
Tree Sparrow	<i>g</i>	<i>g</i>	61 - 100
		<i>h</i>	over 100

Hard Weather Concentrations

Weather conditions play an important role in influencing the number and variety of species. During the winter of 1961/62 a severe cold spell set in on December 18th, and lasted until January 3rd. On December 23rd numbers of Pied Wagtails (160), Meadow Pipits (50+), Teal (55)

and Chaffinches (100) reached their winter peaks and were clearly caused by the continued availability of food on the works during the severe weather.

Migration

Weekly counts are of little use in a serious study of bird migration through any one place, and ideally full daily cover of all daylight hours is necessary. Weekly counts do, however, give an indication of the duration and strength of migratory movements and the following notes relate to the migration periods of the autumn of 1961 and spring and early autumn of 1962 as measured by such counts at the works. A total of 26 species was recorded as migrating through the works.

Autumn, 1961

At the start of the weekly counts in September, 1961, the autumn migration was already under way. On September 2nd the first Snipe (3) and Whinchats (4) appeared and the peak of Sedge Warblers (20+) occurred. During mid-September there was a strong movement (principally S.W.) of Swallows and House Martins, a Turtle Dove on 10th, the last Sand Martin on the 16th, a Spotted Flycatcher on the 17th and 5 Meadow Pipits flushed from one of the humus beds on the 10th were clearly passage birds. The first Jack Snipe was noted on 30th September, two Chiffchaffs on 23rd and the last Yellow Wagtail also on that date. Early October saw the last of the Swallow movement (2 on 7th) also on this date occurred the last Whinchats (2) and the last Sedge Warbler, these departures coinciding with the arrivals of the first Common Gull and wintering Meadow Pipits. The peak of the autumn snipe movement occurred on October 21st when 20 Common and 6 Jack Snipe were counted and these two waves virtually marked the end of autumn's migration.

Spring 1962

The first spring migrant was a Little Ringed Plover on March 24th when there were also peaks in Meadow Pipit (70), Pied Wagtail (90) and Starling (1,000) numbers. Redshank (4) were seen on April 3rd and on 7th the first cock Yellow Wagtail appeared on the sprinklers. The first Swallow was hawking around the sprinklers on April 19th and by April 21st, Swallows, House Martins and Sand Martins were passing through. Swifts appeared in force on April 29th and peak numbers of Swifts and hirundines occurred on May 6th. On May 5th a Whinchat was noted and the first Sedge Warblers were singing in the humus beds, 2 Whitethroats were present on May 12th and on May 19th 3 Turtle Doves were flushed from the poplars, another Whinchat and the first spring Wheatear occurred. Reed Warblers did not appear till June (3 on 7th) and this record marked the end of the spring movements as recorded on the works.

Autumn 1962

Conditions in the humus beds during the late summer of 1962 were favourable to the scolopacidae and a good passage was noted throughout July and August. Species featuring in this movement were Green, Common

and Wood Sandpiper, Greenshank and Snipe. The last Swifts (3) were seen on August 4th. Hirundine passage began early with a westerly movement of juvenile Swallows (20) on July 7th and continued throughout August. The first Whinchat of the autumn was noted on 28th July; on this date the last Reed Warblers (2) were seen. Yellow Wagtails began moving through the works in July. A party of 20+ (all juveniles) was counted on 14th and peak number was of 40 birds on 28th and numbers up to 30 continued to occur throughout August.

Breeding Population

Twenty-one species of birds nested on the works during the 1961 and 1962 seasons.

Table No. 2 lists these species and indicates numbers of pairs involved and the degree of success achieved.

The increase reflected during 1962 probably represents a more thorough study of results rather than a real increase in the numbers involved.

TABLE 2
BREEDING RESULTS 1961/62

<i>Species</i>	<i>1961</i>			<i>1962</i>		
	<i>No. of Pairs</i>	<i>No. of Nests Located</i>	<i>No. of successful broods</i>	<i>No. of Pairs</i>	<i>No. of Nests Located</i>	<i>No. of successful broods</i>
Mallard	6	10	2	4	4	4
Moorhen	6	12	7	6	9	1 or 2
Coot	3	6	3	2	nil	nil
Woodpigeon	*—	—	—	1	1	1
Swallow	2	2	2	nil	nil	nil
House Martin	7	8	6†	5	5	5†
Great Tit	1	1	1	nil	nil	nil
Blue Tit	1	1	1	1	1	1
Wren	1	1	1	2	2	2
Song Thrush	2	3	2	2	2	2
Blackbird	*—	—	—	4	7	4
Reed Warbler	2	2	1	3	2	2
Sedge Warbler	3	2	3	3	1	nil
Duncock	1	nil	1	3	3	2
Pied Wagtail	5+	7	5+	10	10	10
Yellow Wagtail	1	1	1	1	1	nil
Starling	2	2	2†	15	9	15†
Chaffinch	1	1	1	3	2	2
Reed Bunting	4	6	3	5	6	1?
House Sparrow	4	6	6†	6+	6	6+†
Tree Sparrow	6	1	6†	6	4	6†

* probably overlooked

† no account taken of second and subsequent broods

In addition to the species proved to have bred on the works during 1961 or 1962 four others were present for either all or part of the breeding season and may have bred. These are Skylark, Robin, Whitethroat and Greenfinch. It is also known that two members of the Charadriidae

have bred on the works in the past when conditions were favourable to them. These are the Little Ringed Plover, which bred in 1952, and the Lapwing, which bred in four of the six years from 1953 to 1958.

Regular breeders

Of the twenty or so species breeding on the works eight can be regarded as regular in significant numbers, the remainder being somewhat variable and sporadic in numbers or confined to one or two pairs. These regulars are:

Moorhen	Starling
House Martin	Reed Bunting
Sedge Warbler	House Sparrow
Pied Wagtail	Tree Sparrow

In recent years the incidence of Mallard, Coot and Reed Warbler as breeding species has increased but this may be due to a variable factor, the degree of suitable cover in the humus beds, rather than a permanent trend.

Declining species

A number of the species breeding on the works are representative of species that have declined in status in the area in which the works is situated within the past decade, due generally to urbanization. The provision on the works of a type of habitat that is rapidly disappearing in the London area will be of significance in the survival of some of these species as breeding birds in the locality. The following species are representative of this trend:

Moorhen	Sedge Warbler
Coot	Yellow Wagtail
Swallow	Reed Bunting
Reed Warbler	

Nesting sites

At a conservative estimate something like 80 pairs of birds of approximately 20 different species bred on the works in 1961 and 1962. It is not, therefore, surprising to find that all the available habitats are used to their fullest extent as breeding sites. The species utilizing the different habitats are detailed in Table No. 3.

The most important breeding habitat is the double row of poplars that extends the whole length of the southern edge of the works. These trees have been lopped to a height of about 20 feet and are pruned annually. Most of them are rotting and partly hollow and in this condition they provide innumerable holes and crevices suitable for nest siting. Nine different species use this habitat, the most numerous being Pied Wagtail (5 or 6 nests in 1962), Starling (10 or 12 nests in 1962), Tree Sparrow (6 nests) and House Sparrow (3 or 4 nests).

TABLE 3

DIVISION OF NESTING SITES

<i>Banks of humus beds</i>	Mallard
(in or under <i>Urtica dioica</i>)	Song Thrush
	Blackbird
	Sedge Warbler
	Dunnock
<i>Humus beds</i>	Mallard
(in <i>Typha</i> , <i>Epilobium</i> , <i>Alisma</i> , <i>Juncus</i> , etc.)	Moorhen
	Coot
	Reed Warbler
	Sedge Warbler
	Dunnock
<i>Waste ground</i>	Reed Bunting
<i>Sprinkler walls</i>	Reed Bunting
	Pied Wagtail
	Wren
<i>Laurel hedge</i>	Blackbird
	Dunnock
	Chaffinch
	House Sparrow
<i>Pollarded poplars</i>	Woodpigeon
	Great Tit
	Blue Tit
	Wren
	Pied Wagtail
	Starling
	Chaffinch
	House Sparrow
<i>Pumphouse and outbuildings</i>	Tree Sparrow
	Swallow
	House Martin
	Blackbird
	Pied Wagtail
	Starling
	House Sparrow

The humus beds and the banks surrounding them come next in degree of importance. Here Mallard, rails and acrocephalous warblers find suitable nesting sites. Mallard nest principally on the banks under cover of *Urtica dioica* and Song Thrush, Blackbird and Dunnock nest in this plant when it is allowed to grow sufficiently high. Moorhen and Coot use the bases of aquatic plants such as *Alisma plantago-aquatica*, *Juncus* spp. and *Typha latifolia*. The Reed Warbler is confined to the areas dominated by *Typha latifolia*. As the *Typha* stems are too substantial for use as supports for the nest of this species such plants as Sallow (*Salix* spp.) and the dead stalks of *Epilobium* growing amongst the *Typha* are used as nest anchorages. The Sedge Warbler is less dependent on a fully aquatic situation and will nest in *Urtica dioica* and *Juncus* spp. growing on the banks of the beds. The Reed Bunting's preference is similar to that of the Sedge Warbler and nests have been found in *Epilobium hirsutum*, *Rumex obtusifolius*, *Artemisia vulgaris* and *Solanum dulcamara*.

A small hedge of laurel (*Prunus laurocerasus*) separates the sprinklers from the sedimentation tanks and Blackbird, Dunnock and Chaffinch breed

here in very close proximity to each other.

The buildings provide the nest sites for Swallow (on beams) and House Martins (under eaves). House Sparrows and Starlings also breed in the buildings.

Factors affecting breeding success

The species breeding away from the ground in the poplars, the laurel hedge and on the buildings suffer little disturbance and their breeding success is high. Species breeding on or near the ground are, however, very vulnerable and breeding success often very chancy. The humus beds are dried and cleared of vegetation periodically and this was a significant factor in 1962 and all the species breeding in the beds were adversely affected, particularly Coot, Sedge Warbler and Reed Bunting. Excessive rain or flood water affects the water level in the beds and strong winds sometimes flatten the vegetation and these are additional hazards affecting the species breeding in the beds. Predation by mammals is also another factor affecting the ground nesters. The rat (*Rattus norvegicus*) is numerous on the works, stoat (*Mustela erminea*), weasel (*Mustela nivalis*) and fox (*Vulpes vulpes*) have all been recorded and all these undoubtedly prey on the eggs and young of Mallard, Moorhen and Coot. The Carrion Crow is the only avian predator regularly seen patrolling the beds during the spring and summer months.

Summer Visitors Using the Works for Regular Feeding

In the early summer months (May and June) a number of species, not recorded as breeding on the works, regularly used the works as a feeding area. In the 1962 season ten such species were noted namely:

Kestrel	Sand Martin
Little Ringed Plover	Carrion Crow
Redshank	Greenfinch
Swift	Goldfinch
Skylark	Linnet

Of these only the Sand Martin occurs in significant numbers and up to 20 or 30 regularly flight in to the works to hawk over the humus beds from colonies in adjoining gravel pits. The remaining species occur only as twos or threes. In addition to these species the area, particularly the sprinklers, serves as a feeding ground for many Starlings and House Sparrows breeding in the vicinity. The numbers of Starlings is high and many hundreds of breeding pairs must be involved.

Late Summer and Autumn Flocks and Family Parties

From July onwards family parties, loose congregations of juveniles, or mixed flocks of juveniles and adults occur in the various habitats of the works. Birds may also move on to the works for shelter, rest or feeding from the surrounding countryside. The following are the species that were partic-

ularly noticeable in this category in the summer of 1962. The incidence of these and other species varies somewhat from year to year with the changing conditions of the humus beds and waste areas and the fluctuations in breeding success.

Black-headed Gull		Mixed flocks of juveniles and adults, July onwards.
Song Thrush	}	Juveniles and occasional adults in loose association.
Blackbird		
Pied Wagtail		
Yellow Wagtail		
Greenfinch	}	Family parties—sometimes forming loose flocks. Parties of juveniles, family parties and mixed flocks of juveniles and adults.
Goldfinch		
Linnet		
House Sparrow		
Tree Sparrow		Loose flocking occurs from July onwards. Family parties, early summer.

Diurnal Rhythm

A pronounced diurnal rhythm was noted in a number of species regularly using or resident on the works. This appeared to be more pronounced in winter than in summer and is detailed in Table No. 4. Only the species where numbers are appreciable are dealt with.

TABLE 4

DIURNAL RHYTHM

<i>Species</i>	<i>Winter</i>	<i>Summer</i>
Mallard } Teal }	Flights in to feed at dusk and during night. Largest numbers noted at dawn and dusk.	Mallard only. After breeding winter pattern established by August.
Water Rail } Moorhen } Coot }	Present day and night but tendency to feed at night or in twilight noticeable.	Moorhen and Coot only. As for winter.
Snipe	Numbers tend to increase at dusk especially after disturbance.	Not present till late summer when influx occurs at dusk.
Black-headed Gull	Marked tendency for peak numbers to occur late afternoon as birds drop down to feed as they fly over towards roosting grounds.	Pattern as for winter from July onward.
Swallow } House Martin } Sand Martin }	Not present.	Hawking occurs during daylight hours. Roosting concentrations at dusk in late summer.
Song Thrush } Blackbird }	Numbers increase during day some may roost on works.	Fairly constant.
Meadow Pipit } Pied Wagtail }	Influx of both species at dawn and feeding continues till dusk when birds congregate before flying off to roost.	Pied Wagtail only. After breeding both adults and young roost away from the works.

Yellow Wagtail	Not present.	Late summer and autumn. Birds fly in at dusk to roost.
Starlings	Steady increase in numbers throughout the day to a peak mid - afternoon then fairly rapid dispersal prior to roosting. Large parties flying S.W. to roosting grounds often drop onto sprinklers to feed for a while.	No pronounced diurnal peak during breeding season. As summer develops numbers tend to increase throughout day to late afternoon when dispersal occurs and pattern gradually becomes as for winter.
Greenfinch Goldfinch Linnet Chaffinch Reed Bunting	Birds congregate in flocks throughout the day as feeding conditions determine. Only Reed Bunting roosts on works.	Sporadic occurrences in small numbers.
House Sparrow Tree Sparrow	As above.	Both species breed and therefore numbers in early summer fairly constant. Flocking occurs in House Sparrow as soon as young fledged and flocks disperse before dusk.

Principal Feeding Areas and Food Preferences

By direct observation, the regular sampling of animal and plant food available and the analysis of stomach contents an assessment was possible of the relative importance of the principal feeding areas used by birds frequenting the works and the food available and taken by them in those areas. The following is a list of those areas in the probable order of importance.

1. Sprinklers
2. Humus beds (a) under water
(b) dry
3. Waste areas and lawns
4. Compost heaps
5. Sludge beds
6. Sedimentation tanks

The following notes deal with each of these areas in turn. As there is some difference in winter and summer feeding habits and food availability these are referred to separately. Winter (October-March) is dealt with first.

The Sprinklers (Winter)

The following birds have been observed feeding on the sprinklers with the frequency and in the numbers indicated.

Moorhen	Ones or twos at infrequent intervals.
Black-headed Gull	Regularly for short periods. Numbers up to 250.
Wren	Regularly in twos or threes in the wall crevices of the old sprinklers.

Song Thrush	}	Single birds at infrequent intervals.
Redwing		
Blackbird		
Robin		
Meadow Pipit		
Pied Wagtail		As for Meadow Pipit but somewhat more numerous.
Grey Wagtail		Odd birds at infrequent intervals.
Starling		The dominant feeding bird on the sprinklers always present in numbers varying from 100 to 1,000 or more.
Reed Bunting		Occasionally seen in twos or threes, especially in hard weather.

Of these, the Meadow Pipit, Pied Wagtail and Starling constitute the dominant feeding species. The pipits and wagtails tend to feed diffusely scattered over the surface of the sprinkler beds, the Starlings on the other hand work in close packs assiduously searching on the surface clinkers for suitable food and often turning the clinkers over to get at the organisms on the undersurface. All birds are shy of allowing the sprinkler feeding arms to pass over them and will hop over the arm as it approaches. The metal wire stays that support the sprinkler arms provide very suitable perches and often carry a closely packed row of Starlings.

The following are the principal animal food sources available on the sprinklers:—

The oligochaet worm *Lumbricus rubellus*. This worm is abundant in the moss (*Leptodictyum riparium*) which grows on the surface of the sprinklers and is taken by thrushes and probably Starlings and gulls.

The aquatic worm *Clitellio arenarius* is abundant all the year round in the surface film and may be taken by the wagtails and pipits but proof of this is lacking.

Linyphiidae spiders, (e.g. *Leptorhoptrum robustum*) are common especially on the vertical sides of the old sprinklers and these are particularly sought after by Wrens.

Probably the most abundant invertebrate animal inhabiting the filter surface layers is the fly *Psychoda alternata*, abundant in its larval and adult stages, at all times of the year. The larvae of this fly feed in the zooglaeal film that coats the clinkers forming the sprinkler beds. They form the principal food of the Starling in winter as the following details demonstrate:

Date	Age and Sex	Gizzard contents
13.1.62	Adult male	c. 4,000 larvae of <i>Psychoda alternata</i> and 10 pupae.
3.3.62	Adult female	c. 1,000 larvae of <i>Psychoda alternata</i> and less than 30 other insects.

Pipits and wagtails can regularly be seen taking the adults of this fly and it seems probable that it forms the principal food of these species.

The Sprinklers (Summer) (April to September)

There is surprisingly little difference between summer and winter in the fauna of the sprinklers. There is, of course, in warm weather a much greater abundance of free flying insects and the fly *Psychoda alternata* becomes extremely abundant in the air and on solid surfaces in the vicinity of the sprinklers from May onwards and continues so throughout the summer. The fly *Anisopus fenestralis* was also noted as being abundant on the wing in April and May. The larvae and pupae of *Psychoda alternata* continued to be the dominating animal of the uppermost zooglaeal film and the worm *Lumbricus rubellus* continually abundant in the surface vegetation.

Table No. 5 lists the birds seen feeding on the sprinklers during the summer, average numbers involved, and the probable food prey taken:

TABLE 5

BIRDS REGULARLY FEEDING ON SPRINKLERS — SUMMER

Black-headed Gulls ...	Up to 200 from mid-July—larvae of Psychodidae.
Hirundinidae and Swifts	Variable numbers, especially on Spring passage. Locally breeding House Martins feed around the sprinklers all summer. Principal food is the adult flies of <i>Psychoda alternata</i> and <i>Anisopus fenestralis</i> .
Wren	Odd birds—adult flies and spiders.
Song Thrush	2 or 3 in July—probably oligochaet worms.
Blackbird	Odd birds—seen taking worms.
Pied Wagtail	Regular feeder up to 20 or more—takes imagos of Psychodidae and Anisopidae.
Yellow Wagtail	1 to 4—food as for Pied Wagtail.
Starling	Up to 200 in Spring. Numbers increasing as young fledged and sometimes exceed 1,000 in late summer. Adults regularly seen collecting food for young. Principal food <i>Psychoda</i> larvae (as in winter) but adult flies also taken.
Chaffinch	1 or 2 in Spring. Diptera.
House Sparrow	Regular feeder up to 10. Seen taking <i>Anisopus fenestralis</i> in May, otherwise probably concentrates on adult Psychodidae. Local birds regularly seen collecting food for young.
Reed Bunting	1 or 2 in Spring especially in cool weather. Seen to take <i>Anisopus fenestralis</i> .

The Humus Beds (Winter)

The dominant flora and fauna of this habitat have already been described. During the autumn, winter and early spring of 1961 62 many finches and Tree Sparrows were attracted to the beds by the seeding plants, particularly *Chenopodium album* and *rubrum*, *Polygonum persicaria*, *Bidens cernua* and *tripartita* and *Cirsium arvense*. The animal fauna of the beds was attractive to such species as Snipe, the Turdidae and Motacillidae, whereas duck and rails were principally concerned with vegetable matter such as the roots, leaves and seeds of the aquatic plants. Table No. 6 summarizes the birds seen feeding on the humus beds during the winter of 1961 62 and the food available to them:

TABLE 6

BIRDS AND FOOD ASSOCIATED WITH THE HUMUS BEDS, WINTER 1961/62

<i>Species</i>	<i>Numbers involved</i>	<i>Type of bed</i>	<i>Food available—preferences</i>
Mallard	Small numbers, rarely exceeding 12	Wet	<i>Lemna minor</i> , <i>Ranunculus</i> sp. <i>Glyceria</i> sp. Algae. Seeds of aquatics, e.g. <i>Alisma</i> , <i>Polygonum</i> , <i>Rumex</i> spp.
Teal	do.	do.	do.
Water Rail	Ones or twos (max. 4)	do. especially fringes	<i>Gastropoda</i> , <i>Annelida</i> and possibly vegetable matter.
Moorhen	The dominant bird of the wet beds, max. winter population 60	Wet and Dry	Mainly vegetable. Weed seeds (<i>Polygonum</i> , <i>Rumex</i> , <i>Ranunculus</i> , etc.) and aquatic plants, e.g. <i>Lemna minor</i> . Various <i>Gramineae</i> spp. also readily taken. Probably animal food when available, e.g. <i>Annelida</i> , <i>Gastropoda</i> , etc.
Coot	Ones and twos	Wet	Ditto but confined to water and particularly fond of the roots of <i>Epilobium hirsutum</i> .
Snipe	Up to 12	Exposed mud	Oligochaet worms and dipterous larvae—particularly <i>Chironomus</i> spp. which are abundant in humus mud.
Jack Snipe	Usually singletons but up to 6 on passage	do.	do.
Green Sandpiper	Singleton	do.	Insects and larvae, e.g. <i>Culicidae</i> larvae, <i>Coleoptera</i> and larvae. Algae.
Great Tit	Variable (up to 6)	Dry	Insects and insect larvae. <i>Araneae</i> .
Blue Tit	do.	do.	do. Also fond of seeds of <i>Typha latifolia</i> .
Wren	Always present in numbers varying between 2 and 12.	Wet and Dry	Insects and insect larvae. <i>Araneae</i> .
Song Thrush	Variable (1 to 6)	Dry	<i>Annelida</i> , <i>Mollusca</i> (<i>Gastropoda</i>) <i>Arachnida</i> , <i>Insecta</i> and larvae.
Blackbird	Variable (1 to 10)	do.	do. Also possibly seeds.
Duncock	Always present (10 ± 5)	do.	<i>Insecta</i> , <i>Araneae</i> , etc. Seeds of <i>Polygonum</i> , <i>Rumex</i> , <i>Ranunculus</i> , etc.

Meadow Pipit	Small number (up to 6)	Muddy areas and wet vegetation	Insects and larvae (e.g. Coleoptera and Diptera), Annelida, Araneae and possibly seeds.
Pied Wagtail	do.	do.	Diptera, Coleoptera and larvae
Greenfinch	Variable and sometimes numerous	Dry	Weed seeds (e.g. <i>Chenopodium</i> , <i>Bidens</i> , <i>Polygonum</i> , <i>Rumex</i> , <i>Sonchus</i> , etc.)
Goldfinch	do.	do.	Weed seeds particularly fond of <i>Bidens tripartita</i> and <i>Cirsium arvense</i> .
Redpoll	One or two	do.	Seeds (as above).
Chaffinch	The most numerous finch in the beds often up to 30	do.	Weed seeds (as for Greenfinch).
Reed Bunting	Variable (5 to 10)	Wet and Dry	Seeds principally.
Tree Sparrow	Numerous (c. 30) in late winter	Dry	Seeds (<i>Chenopodium</i> , etc.)

The Humus Beds (Summer)

The principal difference in the fauna of the humus beds between winter and summer is typified by the appearance, once the warmer weather has been established, of swarms of adult insects particularly Diptera and this favours the insectivorous birds rather than the seed eaters which tend to be dominant in winter. The diet of many of the resident birds (e.g. Mallard Moorhen, etc.) probably also reflects the greater abundance of animal life during the summer. Diptera particularly abundant from June onwards were found to be Chironomidae, Borboridae (particularly the species *Leptocera limosa*), Sepsidae (*Themira putris*), Ephydriidae (*Scatella stagnalis*), Culicidae (*Culex* sp.) and Psychodidae. Also extremely abundant on and in the vegetation of the beds and surrounding banks were Coleoptera (*Haltica lythri* on *Epilobium*), Lepidoptera (particularly micro-Lepidoptera) and Hemiptera. All these insects provide an abundant source of food to the birds that prey on them.

The clearance work undertaken on the beds during the summer of 1962 gave the beds an open aspect with numerous bare muddy areas and these conditions favoured the Scolopacidae with a result that good numbers of this family of birds visited the beds to feed during the autumn passage period.

From July onwards, by which time many of the weeds growing in the beds were seeding, occasional finches (particularly Goldfinch and Greenfinch) were again seen feeding on the beds. Family parties of Blackbirds and Song Thrushes were also much in evidence in July.

Table No. 7 summarizes the birds seen feeding on the humus beds during the summer of 1962 and the principal food taken:

TABLE 7

BIRDS AND FOOD ASSOCIATED WITH THE HUMUS BEDS—SUMMER

<i>Species</i>	<i>Status or numbers</i>	<i>Type of bed preferred</i>	<i>Food</i>
Mallard	Breeding	Wet	Probably chiefly vegetable (as for winter)
Moorhen	do.	Wet or Dry	Diptera, Gastropoda and vegetable
Coot	Not present after June	Wet	As for winter
Snipe	Small numbers re-appear in Aug. (up to 10)	Wet mud	do.
Green Sandpiper	Up to 6 July-Aug.	do.	Annelida, oligochaet worms Hirundinea Dipterous, larvae <i>Chironomus</i> spp. <i>Culex</i> spp. etc.
Wood Sandpiper			
Common Sandpiper			
Redshank			
Redshank	1 or 2 April June	Wet	Mollusca—Gastropoda
Greenshank	1 or 2 July-Aug.		
Black-headed Gull	Up to 30 July-Aug.		
Swallow	Variable but numerous on passage	Air above beds	Probably dipterous larvae Crustacea (<i>Daphnia</i> spp.) Diptera (<i>Chironomidae</i> , <i>Psychodidae</i> , <i>Culicidae</i> , etc.)
House Martin			
Sand Martin			
Wren	Odd birds	Dry	Insecta. Araneae
Song Thrush	Breeding on banks	Dry	As for winter
Blackbird			
Blackbird	Family parties July	Mud	
Reed Warbler	Breeding	Wet	Diptera (<i>Chironomidae</i> <i>Tipulidae</i>) Coleoptera, Hemiptera, etc.
Sedge Warbler			
Whitethroat	Odd birds	Dry	Diptera, Coleoptera (<i>Haltica lythri</i>)
Dunnock	Breeding on banks	Dry	Probably principally animal (Insecta, Araneae)
Pied Wagtail	Small numbers early summer. Up to 10 July-Aug.	Dry and mud	Principally Diptera
Yellow Wagtail	Odd birds early summer—up to 30 in July and Aug.	do.	do.
Greenfinch	Pairs or family parties—July onwards	Dry	Seeds of <i>Polygonum</i> sp. May also take Diptera
Goldfinch	do.	Dry	Seeds of <i>Cirsium arvense</i>
Reed Bunting	Breeding	Dry and Wet	Insecta and larvae
Tree Sparrow	Family parties July onwards	Dry	Seen taking Diptera
House Sparrow	Odd birds	Dry	Diptera, Coleoptera (<i>Haltica lythri</i>)

The Waste Areas

AREA A (Winter)

The seeding weeds provide the most abundant source of food in this area in winter and finches and sparrows are the dominant feeding birds. The seeds of *Chenopodium album*, *Chenopodium rubrum*, *Rumex obtusifolius*

and *Poa* spp. are the most readily taken. The stomach contents of Chaffinch, Brambling and Tree Sparrow all trapped in this area contained almost entirely the testas of seeds of the two *Chenopodium* species.

The Short-tailed Field Vole (*Microtus agrestis*) is abundant in this area and is commonly taken by the Kestrel.

Other birds regularly using this area during the winter of 1961/62 were Skylark (up to 12), Wren (1 or 2), odd Turdidae, Dunnock (1 to 3) and small numbers of Meadow Pipits and Pied Wagtails.

The numbers and variety of the seed eaters observed were as follows:

Greenfinch	up to 10
Goldfinch	up to 10
Linnet	5 to 20
Redpoll	up to 20, late winter
Bullfinch	2 or 3, mid winter
Chaffinch	up to 30
Brambling	up to 6
Reed Bunting	2 or 3
House Sparrow	variable flock up to 40
Tree Sparrow	large flock (up to 100) second half of winter

AREA A (Summer)

During September 1961 Sedge Warblers (up to 4) regularly were flushed from area A where they were finding suitable feeding conditions. During the summer of 1962 however this area lapsed into comparative insignificance. Parties of Linnets continued to feed on weed seeds until early May. Throughout the high summer the only birds regularly flushed from the area were Skylark (one pair) and Reed Bunting (breeding). Parties (juveniles and adults) of House Sparrows (up to 40) were occasionally present from July onwards and family parties of Linnets returned at the end of July and Skylark numbers increased in August.

Remaining waste areas

The remaining waste areas are comparatively insignificant but on all an appreciable number of weeds grow and these were attractive to the seed eaters as on A. Other factors deserve a brief mention.

A small partially filled-in disused humus bed in area B supported a thick growth of *Typha latifolia* in both 1961 and 1962 and Reed and Sedge Warblers were present until the vegetation was cut and burnt in July 1962.

In area E a thick growth of weeds particularly *Polygonum* and *Rumex* spp. grew in the disused sludge beds during the summer of 1961. This attracted a flock of Greenfinches and House Sparrows (50) during September. After the area was bulldozed in October 1961 conditions became very similar to parts of the humus beds and feeding occurred as in that habitat.

The Lawns

The lawns surrounding the sprinklers can be considered in relation to the waste areas of the works. During winter Moorhens often fed here, when undisturbed, principally on grass and grass seed. Also abundant were Meadow Pipits and Pied Wagtails which species use this area as a gathering ground prior to roosting dispersal though it was also clear that they found insect food there to attract them.

During summer Pied Wagtails continued to use the lawns in good numbers also small numbers of Blackbirds and Song Thrushes (searching for oligochaet worms) and packs of Starlings searching for insect larvae (*Tipulidae*, etc.).

The Compost heaps

The principal food provided by this habitat is animal and the dominant forms have already been mentioned. The following list summarizes the birds seen feeding on this medium during winter months.

Moorhen	Frequently seen (up to 10).
Snipe	Variable numbers (up to 10).
Wren	Ones or twos in late winter.
Pied Wagtail	Regularly seen numbers fluctuating around 6.
Meadow Pipit	Regularly seen numbers fluctuating around 6.
Chaffinch	The only finch regularly seen feeding on this medium. Numbers fluctuating around 12.

TABLE 8
TABLE OF SEED PREFERENCES

	<i>Chenopodium album</i>	<i>Epilobium hirsutum</i>	<i>Polygonum persicaria</i>	<i>Polygonum lapathifolium</i>	<i>Polygonum aviculare</i>	<i>Rumex obtusifolius</i>	<i>Cirsium arvense</i>	<i>Sonchus oleraceus</i>	<i>Senecio vulgaris</i>	<i>Bidens tripartita</i>	<i>Artemisia vulgaris</i>	<i>Alisma plantago-aquatica</i>	<i>Typha latifolia</i>	<i>Poa</i> spp.	<i>Stellaria media</i>
Blue Tit	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
Greenfinch	1	-	6	1	-	-	-	1	1	2	-	-	-	-	2
Goldfinch	-	1	1	-	-	-	14	3	2	3	-	1	-	-	-
Linnet	5	-	1	-	2	-	2	-	-	-	1	-	-	3	2
Chaffinch	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
House Sparrow	6	-	1	-	-	-	1	-	-	-	-	-	-	3	-
Tree Sparrow	3	-	-	-	-	1	-	-	-	-	-	-	-	3	-
TOTALS	15	1	9	1	2	1	17	4	3	5	1	1	4	10	2

The numbers in the above table are the accumulative occasions on which a bird (or birds) was (or were) observed feeding on the particular seed; each occasion might refer, therefore, to one or many birds.

Analysis of stomach contents also emphasizes the relative importance of *Chenopodium* and *Poa* spp.

Compost Heaps (Summer)

As in other parts of the works the principal difference between winter and summer is the appearance with warm weather, of swarms of Diptera. The wet seepages become in summer, literally carpeted with flies, of which the two species *Themira putris* and *Leptocera limosa* appeared to form the major proportion, and on the drier portions of the medium swarms of Psychodidae and Chironomidae become extremely abundant.

The principal birds feeding on this medium during the summer of 1962 are listed below:

Swallow	}	Parties of up to 30 (including many juveniles) in July and August—hawking for Diptera.
House Martin		
Pied Wagtail		
Yellow Wagtail		Mixed parties of juveniles and adults (up to 10) from mid-June.
Starling		Ones and twos early summer, small parties late summer and autumn.
Chaffinch		Parties (mainly juveniles) of up to 50 from end of May.
		Up to 12 to mid-April thereafter odd birds.

The Sludge Beds (Winter)

During the winter months the sludge that is pumped onto these beds shows no sign of life but despite this some species of bird were observed feeding here and presumably were able to find edible inorganic scraps (e.g. fat). The following birds were so observed:—

Moorhen	}	Small numbers (rarely exceeding 6) in the period October to December.
Meadow Pipit		
Pied Wagtail		
Chaffinch		Regularly seen throughout the winter in numbers up to 12.

In the process of preparing the sludge beds wheat straw is spread to a depth of about 1 foot in each bed. During this process House Sparrows (up to 50) search in the straw for wheat-grains. This practice is only suspended during the breeding season in May and June.

Summer

In June, once the warmer weather has become established, the surface of the sludge swarms with the sepsid fly *Themira putris* and its larvae occurs in great abundance in the surface layers of the sludge. Later in the summer of 1962 Psychodidae also occurred in large numbers but the Sepsid remained the dominant fly of this medium. From July onward Starlings and Black-headed Gulls in large numbers were observed feeding on the larvae of *Themira putris* and wagtails on the adult flies. Starlings also freely take the imagos of this fly and the stomach contents of a juvenile Starling taken whilst feeding on this medium on July 15th, 1962 contained both larvae and wings and bodies of this fly.

The following list summarizes the summer sludge feeding birds:

Black-headed Gulls	Flocks of up to 2 or 300 mid-July onward.
Blackbird	Once observed taking fat from sludge surface
Pied Wagtail	Parties of juveniles and adults (up to 12) July onward.
Yellow Wagtail	Small numbers in July and August
Starling	Flocks of up to 100 (principally juveniles) in June and July and up to 300 in August.
Chaffinch	Small numbers (2/3) throughout the summer
Tree Sparrow	Up to 10 June and July

The Sedimentation Tanks

Gulls, principally Black-headed (up to 100) with occasional Common and Lesser Black-backed are the only birds that utilize this habitat as a winter feeding source. Their method of feeding is to circle the tanks in a loose knit flock swooping onto the surface of the effluent whenever an edible morsel of refuse is seen. This procedure is often sustained for many hours.

No birds were observed feeding on the tanks during the summer until the return of the gulls in July although House Martins might on occasions hawk over the area.

Conclusions

The animal fauna that form a living and essential part in the process of sewage purification employed in the works provides an abundant source of food for many species of bird. The Starlings and Pied Wagtails that feed principally on the adults and larvae of the fly *Psychoda alternata* that inhabit the sprinklers are perhaps the most important and striking example of this. The birds, by helping to keep the insect numbers in check, form part of the process of purification.

The flora of the works is rich and varied particularly so in weeds that are attractive to many seed-eating birds.

The physical construction and operation of the works results in the creation of habitats, particularly aquatic, that have diminished drastically in the London environments in the past half century and the continued use of the works ensures that certain specialized feeding and breeding habitats persist and the bird fauna with them.

The works act as a staging post for many birds migrating through the area where they can feed, rest and roost in comparatively undisturbed conditions; as such the works fulfil a useful and necessary role.

It is evident from this paper that the bird life of the sewage works studied is both abundant and varied and that the presence of Weylands Sewage Works is a significant factor in contributing to the variety and continuity of the avifauna of the district.

Acknowledgements

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R. C. Homes and B. L. Sage who read this paper and gave assistance and advice on its presentation.

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The botanical nomenclature follows Clapham, Tutin and Warbergs, *Flora of the British Isles*.

Beddington Ringing Station, 1962

ANOTHER very interesting year was experienced at Beddington Sewage Farm. A total of 1,045 birds of 39 species was ringed, the only new one being a Magpie. Once again Swifts far exceeded any other species in numbers ringed, reaching 658 which was over half the year's total. In addition a large number of Swifts were retrapped many of which had been ringed at other local sewage farms including some ringed as long ago as 1957.

The ringing total is low compared with many earlier years due to several factors, the most important of which was the change in the method of farming which caused ground nesting species to suffer heavy losses. For the same reason autumn flocks of finches were smaller. However, larger areas of wet fields provided more attraction for several species than formerly, particularly waders.

Besides being ringed, birds are now also weighed, measured and examined for moult and parasites before being released. This work will be continued and the data obtained will, it is hoped, more than make up for the drop in number of birds ringed. One hundred and fifteen B.T.O. Nest Record Cards were completed for eighteen species including forty for Tree Sparrows which nest mainly in holes in the dykes despite the risk of flooding.

Full details of the activities of the group are given in the *Beddington Report*, published in March, 1963. It is intended to produce a report annually and while the first issue does not contain all that we would have wished, we hope it will encourage more people to visit us as we should be grateful for additional help in our work.

Many interesting records were obtained during the cold spell at the beginning of the year and it is hoped to prepare a paper for *British Birds* on the subject. Again, during August, up to 9 Greenshank, 7 Green Sandpiper, 2 Wood Sandpiper, a Common Sandpiper, Dunlin, Ringed Plover and Redshank were present. At the end of the year, just prior to and during the long cold spell, there were 250 Teal on one field on one day, and a Gannet, 2 Kittiwakes, extremely large numbers of five species of gulls, Snipe, Skylarks and Redwings were also present.

The interests of the group are now spreading to include other branches of zoology and botany and it is already evident that these studies will prove as rewarding as the ornithology of the area.

We are, as ever, indebted to Mr. E. Hodgson, B.Sc., M.Inst.S.P., manager of Beddington Sewage Farm and Works for the facilities he has so kindly granted us.

Short Notes

The 1962 nesting season brought a pair of Jays to a chestnut tree near our home four miles north-west of St. Paul's. The two young were found on the ground below on June 24th and 25th respectively; both were apparently fully fledged but unable to fly, and No. 1 could not stand. For safety they were put inside the wire surround of an Electricity Sub-Station (approximately 10 feet square) about ten yards from the nest, where the parents continued to feed them, but the fencing was not high enough to keep out cats and both parents were seen persistently "dive-bombing" to keep them off. The two were therefore brought into the house for the night of the 25th, let loose in a ground floor room with suitable "cover" and fed by hand. The next morning a parent bird was on the window sill calling to the young inside. No. 2 was then replaced inside the enclosure with extra rabbit wire as protection where it was fed again by the parents, and No. 1 was taken for a veterinary examination; paralysis of the legs was diagnosed, and it was destroyed. No. 2 remained in the enclosure for seven days before flying, during which time the parent birds continued to feed it without fear of watchers, calling to it on a soft crooning note, and occasionally uttering an astonishingly cat-like mew. Two days after the young bird flew one adult was seen, since when they have not returned.

ELIZABETH PEAL

On the Chelsea and Lambeth Reservoir on March 18th I witnessed a strange attack on a Great Crested Grebe by an immature Great Black-backed Gull. The grebe, attempting to land on a patch of ice, skidded helplessly about. At once four large gulls flew in to the attack but the grebe just managed to take off again with the gulls in pursuit. Three gave up the chase after a few minutes but one immature Great Black-backed Gull persisted and attempted to smash the grebe into the water with its wings. After ten minutes the grebe was visibly tiring and, in a last desperate effort to escape, it made a vertical climb through a line of trees, just scraping through. The gull, being too large to follow, sheered off, leaving the grebe to fly to safety.

R. BROWN

Book Review

COLLINS GUIDE TO BIRD WATCHING. R. S. R. Fitter. *Collins*. London, 1963. 254 pages, with line drawings by R. A. Richardson, and photographs. Price 21s.

This new book from the pen of the indefatigable R. S. R. Fitter is divided into three sections: how to watch; what to watch for; and where to watch. The first part ranges widely over the making of notes, binoculars, nest boxes, first aid, bird protection law and a potted history of organized bird-watching in Britain.

The second part, which comprises about 140 pages, covers every bird regularly occurring in Britain with thumbnail identification sketches. The birds are arranged in roughly natural groupings "as a useful cross check to the arbitrary size groupings" used in the author's complementary *Pocket Guide to British Birds*, though he adheres to the broad arrangement of separating land birds from water birds and waterside birds, a system which, it is claimed, most beginners find useful.

The final section of the book is a topographical guide which, county by county, gives the location of particular types of habitat (some bird watchers may be rather alarmed at the publication, in this somewhat American-style list, of some of their favourite haunts), special birds, reservoirs and sanctuaries, and literature. Some good photographs, principally by Eric Hosking and John Markham, a list of useful addresses and an index complete the volume, which through its author's knowledge and enthusiasm, should provide a valuable stimulus to the beginner and help him along the road to pleasure and proficiency in the field.

R.P.C.



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